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PEPPING FOREST

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EDWARD NORTH BUXTON.

EPPING FOREST

EPPING FOREST

BY

EDWARD NORTH BUXTON

VERDERER



LONDON :

EDWARD STANFORD, 55, CHARING CROSS, S.W.

1885

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PREFACE TO FIRST EDITION.

THE idea of writing a Guide to the Forest occurred to me when I observed how small a percentage of our summer visitors ever venture far from the point at which they are set down by train or vehicle. This is hardly a desirable state of things; and as steam merry-go-rounds and "five shies for a penny" can be enjoyed with equal facility in London, it seems a pity not to encourage, as far as lies in one's power, a more enterprising spirit. It appears that this reluctance to enter the thicket springs, not from indifference to the attractions of the Forest, but solely from a dread, not unnatural to those unaccustomed to the country, of losing the way; and I hope that clear directions how to find, and follow, the most beautiful and interesting routes, will be appreciated. I trust I am not egotistical in thinking that, as I have lived all my life in one or other of the Forest parishes, and for many years have been in the constant habit of exploring its inner recesses, the public cannot have a better adviser than myself in this matter.

I am aware that some excellent cheap Guide-

books to the Forest have been published; but they do not enter with sufficient minuteness into topographical details to serve as a handbook to the stranger who desires to penetrate the wilder parts of the wood. An essential part of my scheme is that the descriptions should be accompanied by correct maps of a scale sufficiently large to facilitate identification of the leading features. Taking the official map published by the conservators, which is of the scale of 3 inches to the mile, I have divided it into sections of a convenient size, which, after careful correction, have been engraved with great care by Mr. Stanford, to whose manager, Mr. Bolton, my acknowledgments are especially due.

To the Itinerary I added an historical chapter, believing that those who use the Forest would wish to know the influences which, centuries ago, made it what it is, and how it came to be rescued for their enjoyment. For some very useful suggestions bearing on this part of the work I have to thank Sir Arthur Hobhouse and Mr. Robert Hunter, than whom no men are better acquainted with the legal aspects of the question.

I find that the most intelligent interest is taken in our woodlands by those who there pursue their studies in one or other of the branches of Natural History. Many of them are of humble station; but as members of societies, which are very numerous in London, of botanists, ornithologists, fungologists and microscopists, they are enthusiastic

searchers into nature. I have therefore added some chapters on the different forms of life which they may expect to find in the course of their rambles. In this task I have been much assisted by such able naturalists and experienced observers as Professor Boulger, Mr. T. E. Harting, Mr. English, and others.

Mr. Heywood Sumner has embellished the text with some charming drawings, some of which I hope will incidentally be of value in helping to identify the features and landmarks by which I have sought to point out the way.

To Mr. J. Wycliffe Taylor and to Mr. Moon I am also indebted for some beautiful sketches, most truthful to nature, in the one case of birds, and in the other of flowers.

I have also to thank my brother-verderers and several of my neighbours for many valuable suggestions.

I fear that my book in its present form is rather too expensive for common use, but I hope it is only the forerunner of a much cheaper edition.

E. N. BUXTON.

KNIGHTON, *August* 1884.

PREFACE TO SECOND EDITION.

I HASTEN to fulfil the promise made in the concluding paragraph of the preface to the First Edition. Indeed, my main object from the first was to produce a volume which should be useful to the general body of Forest visitors. I have been able to add somewhat in this edition to the lists of birds and animals.

E. N. BUXTON.

March 1885.

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BORDER FROM THE ARUNDEL PSALTER, A.D. 1320.

EPPING FOREST.

ITS HISTORY.

“This is the forest primeval.”—*Evangeline*.

“I ’a stubbed Thornaby Waäste.”—*Northern Farmer*.

A VERY brief account of the history of the Forest, showing how the primeval woodland was set aside for the pleasure of the King, and so was preserved with little change from century to century, until it came to be dedicated as an open space for the enjoyment of King Demos, will not be out of place here. The Forest, as we know it, is probably but little altered in character from what it was in the time of the Druids, but its boundaries are sadly curtailed, and that which is now devoted to the recreation of the people and the pasture of the commoner’s cattle is but a fraction of the ancient Royal Forest.

As regards its ancient limits, it appears that in Saxon times, and for some centuries later, a large proportion of the county of Essex,—according to Gibson “as far as the sea,”—was “waste,” *i.e.* natural woods, open heathery spaces, and grassy commons. When the whole of London was no

bigger than Colchester is now, and the population was everywhere sparse, there was not the demand for cultivated ground which arose at a later period. Even as late as the time of Camden, who wrote at the end of the 16th century, we learn that "Near the Ley . . . spreads out a chase of vast extent, full of game, the largest and fattest deer in the kingdom; called heretofore, by way of eminence, the Forest of Essex, now Waltham Forest, from the town of Waltham, in Saxon Wealdham, *i.e.* a dwelling in the woods." But that it was not all barren we learn from Norden, who, writing at about the same period, said, "This shire is most fatt, fruitfull, and full of profitable thinges. . . . This shire seemeth to me to deserve the title of the Englishe Goshen, the fattest of the lande: comparable to Palestina that flowed with milke and hunnye. But I cannot coñiende the healthfulnes of it: and especiallie nere the sea coastes . . . which gave me a moste cruell quarterne feuer."

In the reign of King John the grievances of the people against the Forest laws became intolerable, and he was compelled to limit the Royal Forest to what was known as the Forest of Waltham, and although he sought to evade the consequences of this concession, it was subsequently confirmed by Edward I. Its boundaries extended from the river Lea on the west, to the Romford Road on the east; and its northern limit passed through Nazing, Abridge, and Havering-atte-Bower. Three centuries later King Charles I. attempted again to enlarge, not only this Forest, but pretty nearly all the Royal Forests. His object was not so much to extend his hunting grounds as to extort ex-

orbitant fines from those who held lands within the enlarged boundaries. He also sought to raise money by a scheme for the total disafforestation and sale of Waltham and other Forests.¹ These attempts caused great discontent, and were met with determined opposition, especially in the county of Essex, when my sturdy fellow county-men were guilty of some "fashious actions," and even had the impudence to hold a "conventicle" "in the very brake where the king's stag should have been lodged for his hunting the next morning." The result was that in the first session of the Long Parliament an Act was passed to fix the Forest boundaries, and a perambulation was made which showed that Waltham Forest comprised 60,000 acres. It must not be supposed, however, that the whole of this wide area was woodland and heath. In the time of the Tudors there is reason to believe that four-fifths were under some sort of cultivation, but at the same time the

¹ That this scheme was at one time nearly realised is shown by the existence among the State Papers preserved in the Public Record Office of a list of claims of owners, upon a contemplated disafforestation of Waltham Forest. Along with this is another State Paper, which shows that in the case of Gaultres Forest the disafforestation was actually accomplished "in pursuance of His Majesty's Royal resolution, as well for raising moneys for supply of his weighty affairs, as for the increase of his revenue;" and we learn further that His Majesty received £20,000 for his share, and also that "the said inhabitants by strong hand do make havock and insufferable spoil of the woods, drive and keep their cattle upon His Majesty's said part of land, and being disturbed by the purchasers' agents, do make pound-breaches, rescue their cattle, and beat and wound such as disturb them."

whole was strictly subject to the Forest laws and regulations for the time being; and the interests of the cultivator, of the commoner who turned his cattle out to graze on the Forest, of the owner of the soil, and of the public, were subordinate to the sporting rights of the Crown.

Previous to the time of Henry VIII. nearly the whole of the ownership of the soil, subject to the sporting rights of the Crown, was vested in the powerful religious bodies of that day; such as the Abbey of Waltham, of which some account is given at page 62, which had received them as grants from various monarchs, pious or rapacious, in return for benefits of a spiritual or substantial character; but other rights and favours were also constantly granted to ecclesiastics, among whom the Abbess of Barking seems to have been especially favoured, as the following extract shows: "We command you to allow the Abbess of Barking her reasonable estovers in her wood at Hainault for her firing, her cooking, and her brewing, if she has been accustomed so to do in the time of our Lord King John our father; also to permit the same abbess to have her dogs to chase hares and foxes within the bailiwick if she was accustomed to have them in the time of our aforesaid father." At the time of the Reformation these rights reverted, or were reannexed, by the Crown. Later on they were again granted to various persons for services received, with the exception of those which related to the section which lay to the north-east of the river Roding, called the Forest of Hainault, which had belonged to the Abbey of Barking, and which unfortunately, as I shall presently show, remained in the hands of the Crown.

Our business, however, lies chiefly with that part known as Epping Forest, which, having been divided by the Crown among many favoured persons, descended from them, by patrimony or purchase, to the eighteen lords of manors who held them until they were recently acquired by the Corporation of London.

For the proper understanding of the history of the Forest it is desirable to divide it into three periods, during which three distinct influences or ideas prevailed as to the use to which it should be put. During the first, which lasted at least from pre-Norman times until the last century, the maintenance of the sporting rights of the sovereign was paramount, and to this every other interest was subordinate. About the time that this function of the Forest had lapsed by disuse, though the right still existed, a new idea began to lay hold of the public mind, and a very true one within proper limits, that "he is a benefactor who makes two blades of grass grow where one grew before," and that to bring waste land into cultivation was a public duty. Subsequently the growth of population forced upon the minds of far-sighted people the new truth that fresh air and recreation are not less necessary than food, and of peculiar importance to those who live in great cities.

Each of these influences had a notable effect on the Forest, and combined to make it what it is. I propose to trace briefly the condition of things during the three periods when these separate currents of opinion prevailed.

The Norman kings, as well as their predecessors and successors, were great hunters, and of one of them—William the Conqueror—the Saxon Chron-

icle says that "he loved the Great Game as if he had been their Father." Being besides men of arbitrary will, and very great political power, they increased the stringency of the previously existing Forest laws. They assigned as Royal Forests many wooded districts in various parts of the country, and enlarged the boundaries of others. It must not, however, be supposed that they were then for the first time turned into "waste" land. According to Lord Coke the great majority of them had from immemorial antiquity been forests, as we understand the word, but not necessarily subject to Forest laws. The Royal Forests have been defined as "certain territories of woody grounds and fruitful pastures, privileged for wild beasts and fowls of forest chase and warren, to rest and abide there in safe protection of the king for his delight and pleasure." They were not enclosed, but were "meered and bounded with unremoveable marks, meers and boundaries," that is, natural land-marks such as hills, rivers, and trees. One old writer, enlarging on the use of the Forests, says they "are for the profit and strength of the kingdom, for the forests are the ships' nurseries of timber . . . likewise of the king's ships, which chase from robbing of it the wasps and hornets, I mean the pirates and the greater enemies;" but he lays most stress on the fact that they are the "chief object of the king's princely delight." And he especially commends Waltham and Windsor Forests on account of their convenience for the "entertainment of foreign princes and of their agents and ambassadors, because the nearness of these two forests unto the city doth much add to the pleasures of them."

Although in some cases, such as the New Forest, cultivated lands were laid waste to gratify the royal pleasure, villages and enclosures were often allowed to exist within the limits; but it is important to observe that they and their inhabitants were *subject to the full stringency of the Forest laws*. One end which the kings had in view, in enacting these laws, and which embodied a policy natural to a conquering people, and found in all the countries subjugated by the Germans, was to keep weapons out of the hands of the people. Another reason was the extortion which severe laws enabled the Crown to practise. But the *primary object*, to which everything else had to bow, was the preservation of the Forest animals, especially the deer—the King's right of "vert and venison," as it was called. Not only were these animals forbidden to be killed, under penalties of mutilation and even death, but the fences were kept down to such a height that a doe with her fawn could readily jump them,¹ and the owners could not even drive the deer from their crops, on which they fattened; nor could new houses be erected, because of the "increase of men and dogs and other things, which fright the deer from their food;" or the cultivation changed, or trees cut down in enclosed lands without special leave granted by the Forest Courts. Dogs were "*expeditated*," that is, three claws of the fore-feet were cut off close to the ball of the foot to prevent their chasing the deer, and one writer says that only such dogs were allowed "as would go through the Lord Vesci's stirrup, who was Justice in Eyre

¹ This condition has had an important legal bearing on the fate of the Forest, even in modern times.

in Edward II.'s time." The severity of these penalties and restrictions, originally enacted by King Canute, was somewhat mitigated by a charter, "Carta de Foresta," which formed part of Magna Charta extorted from King John, who had been forced to abandon large tracts of Royal Forest; but in their main lines they continued to be recognised and enforced for many centuries since his time. The following are specimens of extracts from the clauses of these laws, lenient by contrast with some others which might be quoted, and fairly show their character:—

"For the offence of Venison or hunting, not unworthely haue bene accounted amongst the greatest offences of the Forest euen of auncient time. But the offence of Vert (except it be for the breach of our Roiall free chace) it is so little, and of so smal an account, that this our Constitution or Law doth scantly respect the same. . . ."

"If any freeman shall chase away a Dere, or a wilde beast out of the Forest: whether the same be done by chaunce, or of a set purpose, so that thereby the wilde beast is forced by swift running to lyll out the tong, or to breathe with his tong out of his mouth: he shall paie to the king ten shillings amends for the same offence: but if he be a seruile person, then he shall double the same recompence: but if he be a bondman, then he shall lose his skinne. . . ."

"If a greedy rauening dogg shall bite a wild beast, then the owner of the same dogg shall yeeld a recompence to the king for the same according to the valew of a freeman which is twelue times a hundred shillings. If a Roiall beast shall be bitten,

then the owner of the dogg shal be gilty of the greatest offence. . . .”

These laws were put in force by Forest Courts maintained for the purpose of resisting encroachments, and protecting the deer and the vert. These were the *Court of Attachment*,¹ or forty-day court, presided over by four verderers, who were chosen by the freeholders of the county, hearing cases against offenders, in the first instance, and dealing at once with offences when the damage was not more than fourpence; the *Court of Swainmote*, also presided over by the verderers, but assisted by a jury of freeholders in the Forest,² who tried offenders, but if found guilty, sentence was reserved for the highest court, or *Justice seat*, held at much longer intervals, and presided over by the Chief Justice in Eyre. In addition all general questions of right were tried by a jury of freeholders before the same authority, which from time to time issued orders for the regulation of the Forest. The following quotations of orders from the Court Rolls as recently as the beginning of the last century are fair illustrations of the working of these courts:—

¹ Some speak also of a *Cheyne* Court for the expedition of dogs.

² In the Stowe Collection, recently acquired by the British Museum, there is the transcript of a charge delivered to the jury and officers constituting the Swainmote Court in 1634, and the Court seems to have been presided over on that occasion by one of the judges. It is probable that he was a creature of Charles I., and that this unusual step was taken to enable him to allay the rising irritation, felt at that time against the Forest laws, and the strained interpretation which Charles sought to place upon them. A large part of the charge is occupied by an elaborate vindication of the king's rights.

The licenses to shoot small game in the Forest usually included an authorisation "to take all guns, dogs, and other engines and instruments, wherever the sportsman should find them, from all mean and disorderly persons who are not permitted by law to have and use such things" (Dec. 18, 1713).

On Jan. 7, 1717, one of the under-keepers "presents 3 brace of deer rascally found dead."

On June 17, in the same year, the court "ordered that ye toyles brought to this court by Samuel Heybourne be burnt or cutt in pieces dureing the sitting thereof."

On July 25, 1719, the court ordered "that ye Beadle of the Forest give notice to ye poor people adjoining to ye Forest to keep their geese near to their houses and not let them ramble upon ye Forest otherwise shoot them."

On Nov. 22, 1733, it was ordered "that the severall keepers of the Forest DO hinder the poor people from gathering up the Dung and laying it in heaps in ord^r. to carry it away upon their owne lands."

On Oct. 14, 1749, it was ordered "that the keepers do take up and impound all Asses going upon the Forest."

On Aug. 28, 1750, it was ordered "that the gun taken by Joseph Mason from Tho^s. Gill be given to Mr. Gore a farmer at Waltham to guard him in his journeys to and from London."

The large room in Queen Elizabeth's Lodge was designed and used for the holding of the lesser courts, which made such orders as the above. Licenses or "Deputations," as they were called, to shoot, red-deer and fallow excepted, were

granted to individuals of position, subject to the proviso "that he do use the liberty with that moderation which is fitting." These were continued to quite recent times, and two or three holders of licenses are still alive, and one occasionally exercises his right.

For the watching of the Forest, and for the enforcement of the decrees, there were, besides the above-named *verderers*, thirteen master keepers, who were gentlemen of landed estate, and a number of *foresters*, *agistors*, and *regarders*, who attended upon his Majesty's vert and venison, reported encroachments, and detained and charged offenders; *woodwards*, who, as the name implies, had a care for the timber; and *reeves*, who marked the cattle of those who had commoning rights, and impounded stray beasts. The functions of the reeves are not less important at the present day than they were at the time of the Saxons. Over all these officials was an hereditary *Lord Warden*, whose duty it was to maintain the Forest unimpaired for the king's pleasure, and who enjoyed the following perquisites:—"Of every covert and hedgerow to be sold, of every shilling one penny; and of every wood to be sold, the second best oak; and of the buyer and seller of every such wood, one bow to one broad arrow; and one penny of every shilling of the seller and buyer of every such wood upon the sale of it."

The nature of the functions originally entrusted to the chief officers of the Forest is well shown by the following quaint rhyming charter of appointment by Edward the Confessor; but this refers to the earliest period of which we have any documentary evidence relating to the Forest laws:—

" Ich, Edward Koning,
 Have yeven of my forest the keping
 Of the hundred of Chelmer and Dancing
 to Randolph Peperking and his kindling
 Wyth heorte and hynde, doe and bocke,
 Hare and foxe, Catte and brocke,
 Wylde fowel with his flocke
 Partrich, fesant hen, and fesant cocke,
 With green and wylde stob and stocke
 to kepen and to yeinen-by al her might,
 Both by day and eke by night.
 And hounds for to hold
 Good and swift and bold
 Four greyhounds and six racches
 For hare and foxe and wilde cattes ;
 And therefore Iche maac him my booke
 Witness the Bishop Wolston,
 And book ylered many on
 And Swein of Essex, our Brother
 And teken him many other ;
 And our steward Howoelin
 That by sought me for him."

It may be asked how it was that any were found to live within the bounds of the Forest, where they were subject to the pressure of these Forest laws ; but the answer lies in the fact that they received very valuable compensation in the commoners' rights, which they possessed from ancient times, of depasturing their cattle on the waste ; of the *pannage* of pigs ; and of lopping the trees for fuel ; and, in addition to these recognised advantages, there were, if report speaks truly, some illicit ones, in the shape of an occasional chance of a fat buck to the man who was not afraid to run the risk. Certain it is that Woodredon Farm, which was then, and is now, a favourite resort of the deer, commanded an excessive rent on account of the facilities which it offered for poaching.

The right of commoning was limited to horses and "neat beasts" [cows] "couchant and levant,"

and extended to the whole year except during the fence month, commencing the 25th June, when the cattle were required to be withdrawn, on account of the does and newly-born fawns; but since the Crown allowed their rights to fall into abeyance the close time has not been enforced. In most royal forests there is another close time, called *Winter Heyning*. This extends through the winter months, and is for the purpose of reserving the food, which is then scarce, for the deer; but I cannot find any record of this having been enforced in Epping Forest.

The same persons who enjoyed the privilege of commoning cattle had also the right of *pannage*, *i.e.* of turning out their pigs at Michaelmas to eat acorns and beech-mast. The amount of *pannage* varies in different seasons, but it was always a valuable right, woods being often considered rather by the number of pigs they could feed than by the timber.

The right of lopping was enjoyed in some manors by persons to whom special assignments had been made of so many acres, and in Loughton the right extended to all the householders of the parish. This right had an important influence on the fate of the Forest, as I shall presently show. The object of the forestal laws being to maintain the *status quo*, it is not surprising that the condition of the Forest, as I have described it, remained without material alteration for many centuries; but I now come to what I have called the second period—the utilitarian age—when it was sought to absorb the waste for cultivation and building. The earliest expression of the idea that this was beneficial which I can find is contained in Harrison's

"Description of England," written in the 16th century—"Certes, if it be not one curse of the Lord, to haue our cuntry conuerted in such sort from the furniture of mankind, into the walks and shrowds of wild beafts, I know not what is anie. How many families also these great and small games haue eaten vp, and are likelie hereafter to deuoure, some men may coniecture * * * they shall saie at the last, that the twentieth part of the realm is imploied vpon deere and conies already, which seemeth verie much, if it be duly considered of." The development of this idea is the dark page in my history, when the Forest was despoiled of many a beautiful glade. Let us pass over the bad quarter of an hour as rapidly as possible.

The machinery of the Forest laws existed in full force until near the end of the last century, and was effective in preventing encroachments. Such enclosures as were allowed were all recorded in the Court Rolls, and were exceedingly minute both in number and in quantity. But Mr. Wellesley Pole, who, in his wife's right, became Lord Warden, saw that more profit was to be made in breaking his trust than in keeping it, and by refusing to support the authority of the verderers, but on the contrary by his example encouraging persons to defy the Forest law, and in other ways, designedly brought the Forest laws into abeyance so that he might himself infringe them with impunity. This he proceeded to do by selling the rights he was appointed to guard. At the final settlement of the Forest question, the office was abolished by Act of Parliament, which directed that compensation should be given to its then

holders, the trustees of Lord Mornington, for being deprived of this hereditary trust. They claimed £1000, and were awarded £300 in the arbitration.

The use for sporting purposes by the Crown having all but ceased, and its chief representative seeking to turn his office to profitable account, it is not surprising that the Forest laws were laxly administered, and that the machinery became rusty. Concurrently the growth of London increased the demand for produce of all kinds, and, while the supply was artificially limited by protective laws, induced pressure to extend the range of cultivated ground, and enhanced the value of land for building. The term "waste" of the Forest seemed to imply that it was of no value to anybody while it remained in that condition, and tempted those who had the power, or thought they had, to turn it to account. Naturally those parts adjacent to the metropolis were the first to fall into the hands of speculators, and a glance at the map shows that the southern half of the Forest, even now that such large restitutions have been made, presents a sadly tattered appearance. It was, however, not till comparatively recent times that the Forest Courts began to be generally disregarded and defied. The tradition of their terrors still remained; and, though small encroachments were made from time to time, it was not until the middle of the present century that wholesale enclosures began to be effected.

The Office of Woods and Forests was largely responsible for the mutilation which ensued. In the case of Hainault Forest, which lay to the east

of the river Roding, the Crown were owners, not only of the sporting rights, but of the manorial rights and the soil as well; and, when the Crown rights were commuted, it was vested in the above named officials for the benefit of the people at large. They have unfortunately taken an exceedingly narrow view of their trust, and have acted on the short-sighted doctrine that they were to show the best balance-sheet which they could at the moment. Their policy was thus expressed by the Chief Commissioner, the Hon. K. Howard, who, speaking at the moment of the New Forest, said, "We want to get as much as we can out of the Forest;" and what they expected to get is shown in the following recommendation by one of his assistants in the New Forest, of a large enclosure by the Crown, "because, exclusive of other advantages, by so doing, *all the best pasture would be taken from the commoners, and the value of their rights of pasture would thus be materially diminished, which would be of importance to the Crown in the event of any such right being commuted.*" Neglecting the future value of open spaces near great cities, they recommended—and the House of Commons unhappily endorsed the proposal in 1851—the complete destruction of the woodlands of Hainault, and its conversion into arable land. A contract was made with a manufacturer of steam ploughs, who, attaching his anchors to the soil, dragged up by the roots the old oaks, including the Fairlop Oak of ancient memory. The whole operation was concluded in six weeks, and public opinion, even if it had been then ripe for a protest, had no time to act before the work of desecration was complete. Thus the Hainault division of the Forest disappeared for ever, with

the exception of a small and very pretty wood by Lambourne, belonging to Colonel Lockwood.

In the case of Epping Forest, governed, as at Hainault, by the same narrow policy, unaccompanied by foresight or common sense, but possessing here only the Crown's forestal rights, and not the manorial rights or the soil, the Commissioners proceeded to offer these rights for sale to the various lords of manors for about £5 an acre; nay, almost to compel the purchase by threats of selling them to others, and by the inducement that their purchase by the lords would give the absolute right to enclose. We cannot greatly blame the latter if, after acquiring the Crown rights under these circumstances, they took an exaggerated view of their powers of enclosure. They now had only the commoners to deal with, and they believed that if each could come to an agreement with this class in his own manor, he would have satisfied every claim. On the face of it, this did not seem an unreasonable view, and though we now know that it was erroneous in law, all we need say, or can say, is that they were badly advised. At the same time the extension of railways, by enabling those who had business in the city to reside beyond its limits, enormously increased the demand for, and the value of, land in the suburbs, and offered a new temptation. Enclosures of large blocks, often of several hundred acres in extent, followed one another with alarming rapidity. In 1850 the Forest comprised almost exactly 6000 acres. During the ensuing twenty years just half this area was surrounded by fences and partly built upon.

While this was proceeding a new spirit arose,

or was stimulated by the impending danger, and I am happy to think that I am now entering on the third period, when a truer and a juster view of the needs and rights of the public began to prevail. Opinion was at the same time influenced by the fact that, as the markets of the whole world had been thrown open to us by Sir Robert Peel, the importance of laying every available acre under the plough was diminished.

We now reach the great legal contest which



MONK WOOD.

lasted fifteen years, and resulted in the preservation of the 5500 acres which the public now enjoys.

A society, called "The Commons Preservation Society," was formed for the purpose of resisting encroachments on this and other open spaces. It has included such names as Mr. Cowper-Temple, now Lord Mount-Temple, Mr. W. H. Smith, Mr. John Stuart Mill, Sir Charles Dilke, Mr. Fawcett, Mr. Shaw-Lefevre, Mr. Charles Bux-

ton, and Miss Octavia Hill—all of whom took an active part on its committee. Such a body had, as was to be expected, great parliamentary influence. Among other steps that were taken at its instigation, a Committee of the House of Commons was appointed, who reported in 1863 that the Forest was being destroyed, and recommended that the forestal rights of the Crown should be enforced where they had not been sold.

Two years later another committee was appointed to inquire into all the open spaces round London. The view of the lords of the manor, which was urged upon these committees, was that nothing stood between each lord and enclosure on his own manor but the right of the commoners of that manor, which rights in several of the manors had either been compensated or surrendered. On the other hand, the opponents of this view maintained that the common rights still existed, and, even if little used, were sufficient to resist enclosure. This committee repeated the recommendation with regard to the Forest which had been made by the previous one; but, though an Act was passed providing for the regulation of commons, no steps were taken by the Government of the day with regard to the Forest, and in default of this the party of enclosure gained courage to assert what they believed to be their rights by further large enclosures. Within a comparatively brief period nearly 3000 acres were thus surrounded by fences. Public opinion began to be aroused, but the first overt act of resistance was committed by a labouring man—one Willingale—who persisted in asserting his ancient right of lopping in Loughton Manor, as his forefathers had done. It is held locally that this right was

granted by Queen Elizabeth to the poor of the parish, but it is probable that it had a much earlier origin. It is further believed that it was held subject to the condition that on the 11th of November in each year the inhabitants should perambulate the Forest, and that, at the stroke of midnight, the oldest of them should drive an axe into one of the branches. Other parishes are said to have enjoyed similar privileges, but to have lost them through omitting this ceremony. But these beliefs are not supported by any evidence. Willingale's defiant act was treated by the Justices as a theft, and he, not having knowledge enough to assert his right before them, was imprisoned. His case was, however, supported by the above named "Commons Preservation Society," and the necessary funds being supplied by a member of it, an action was commenced in support of the lopping right, and this step, involving a legal claim, had necessarily the effect of maintaining the *status quo* in Loughton Forest pending the decision of the case. Although this case dragged its slow length for several years, and was never finally decided, it had the most important consequences. The time gained, during which the Forest was practically saved from further inroads, allowed public interest in the question to grow, and brought into the field more powerful combatants, whose resources were used to raise wider and more far-reaching issues. Still the attitude of the lords of the manor was so confident, and the combined front which they showed was so firm, that they succeeded in persuading the Government of the strength of their case, and a Bill was actually introduced into Parliament by the First Commissioner of

Works, which would have given the public only a paltry 600 acres, with leave to purchase at full market-value 400 more, which were allotted as compensation to the commoners, the whole of the remaining 5000 acres being absolutely made over to the manorial owners. I well remember the meeting, which was held at this crisis, of the "Commons Preservation Society," at that time the only organised body which seemed to care for the interests of the public. So dark was the outlook that it was seriously debated by the committee whether this so-called compromise should be accepted. It is not too much to say that the fate of the Forest trembled round the table where this committee sat. If weak-kneed counsels had then prevailed, the Bill would probably have passed without opposition, and the Forest, as we know it, would have ceased to exist. Happily a spirited policy carried the day. The Bill was vigorously opposed, and dropped, and Mr. Cowper-Temple subsequently carried against the Government an address to the Crown, calling upon it to preserve those parts of Epping Forest which had not been enclosed by legal authority. The immediate result of this was the passage in the next session of a Bill appointing a Royal Commission to inquire into the rights of the Forest, and prepare a scheme for its future management.

Public attention was now fully aroused, and a new body was formed, called the "Forest Fund Committee," who assisted in forcing the question to the front; but the public without a champion is powerless. Happily in the Corporation of the city of London a doughty one was at hand, able

to contend even with the united forces of the manorial lords. It was Mr. Scott, the far-sighted City Chamberlain, who first suggested that the compulsory corn metage should be commuted into a small fixed duty, and applied to the preservation of open spaces; and the sinews of war having been thus provided, we owe it to Mr. T. C. Bedford—an able and fearless member of the Court of Common Council—that the duty of making a supreme effort for the rescue of the Forest was vigorously pressed upon the Corporation. Owing to the happy chance that the Corporation were owners of a cemetery at Wanstead, which gave them the right of grazing a cow or two, they were able to take up the cause of the public as commoners of Epping Forest. In August 1871 a suit was commenced against the lords of the manors, which lasted more than three years, and cost both sides not less than £30,000. The labour connected with it was enormous, owing to the multiplicity of interests involved and the obscure and intricate questions of ancient law which it raised. That it was conducted to a successful issue was largely due to the untiring energy of the city solicitor, assisted by Mr. Robert Hunter, who, as honorary solicitor to the Commons Preservation Society, had for several years made the law affecting common rights his especial study. It was contended on behalf of the lords of manors that each manor was separate, and that its commoners had no rights over the remainder of the Forest, so that, in fact, if he could succeed in satisfying his own commoners, each lord of a manor could enclose or do as he liked with it. On behalf of the Cor-

poration, on the other hand, it was contended that there never were such boundaries, and that the commoners had always enjoyed the right of "intercommonage," as it was called—*i.e.* for their cattle to wander all over the Forest.

This tremendous legal battle, in which eighteen barristers were engaged, lasted for three years, and the final hearing for seventeen days. At length, on the 24th November 1874, the Master of the Rolls, Sir George Jessel, delivered a judgment which has never been surpassed for lucidity and conciseness, completely endorsing the contention of the Corporation, and for ever overthrowing enclosures, the illegality of which was left beyond dispute. So masterly and conclusive was the judgment that no attempt was ever made to appeal against it. It is needless to say that this happy conclusion of the long controversy, which had cost so much anxiety and heart-burning, was received with general congratulation.

Soon after, the Commissioners, who for several years had been prosecuting their inquiries on the same lines as the Corporation suit, presented their report, which included a scheme for the future regulation of the Forest, but recommended very easy terms to the "grantees"—*i.e.* those who had bought land shown to be illegally enclosed. This did not meet with general assent, and Mr. Burney, a commoner of the Forest, took upon himself to bring down a large party of workmen, and demolished the fences of some of the grantees; and, although this action was condemned at the time, it had the effect of reminding the holders of this land of their precarious position under the decision of the Master of the Rolls if

some scheme or compromise were not presently devised. Under stress of this dread, and under the skilful pilotage of Sir H. Selwin Ibbetson, M.P., the Act of 1878 was passed without opposition, and finally settled the whole question. It provided for the disafforestation of Epping Forest, which is henceforth to be under the charge of the Corporation of London as conservators. It is therefore no longer a Royal Forest, except that the Crown appoints the Ranger, in pursuance of which provision the Queen has appointed His Royal Highness the Duke of Connaught. The deer were ordered to be transferred to the conservators, and the rights of the commoners were preserved intact. It restored to the Forest the whole of the lands in the hands of the lords of the manors, and, with regard to those which had been purchased and on portions of which houses had been erected, it appointed an arbitrator, Sir Arthur Hobhouse, to determine how much land should be allowed to be retained in each case as "curtilage" to the house, and what payment should be made for it. He had also to award compensation to the lords of the manors, the dispossessed grantees, and the possessors of lopping rights, now put an end to for ever, and to settle divers other questions. Many of these proved to be of great difficulty and delicacy, and it was only after the lapse of several years and the exercise of great industry and judgment, combined with tact, on the part of the arbitrator, that their intricacies were at length unravelled. The final result was that 5530 acres were preserved to the public.

The management of the Forest was vested in

a committee, called the "Epping Forest Committee," which has all the powers of the conservators, and which consists of twelve members of the Court of Common Council and four verderers, resident within the Forest, to be elected by the commoners. A superintendent has since been appointed, and a staff of twelve keepers preserve order in their respective beats. The section of the Act which concerns us most, and which ought to be written in letters of gold, is that which provides that the Forest is to remain for ever "as an open space for recreation and enjoyment." This is probably the first time that the public right of the use of open spaces has been recognised in law. That it is fully appreciated is shown by the increasing numbers who annually visit what is theirs by inalienable right.

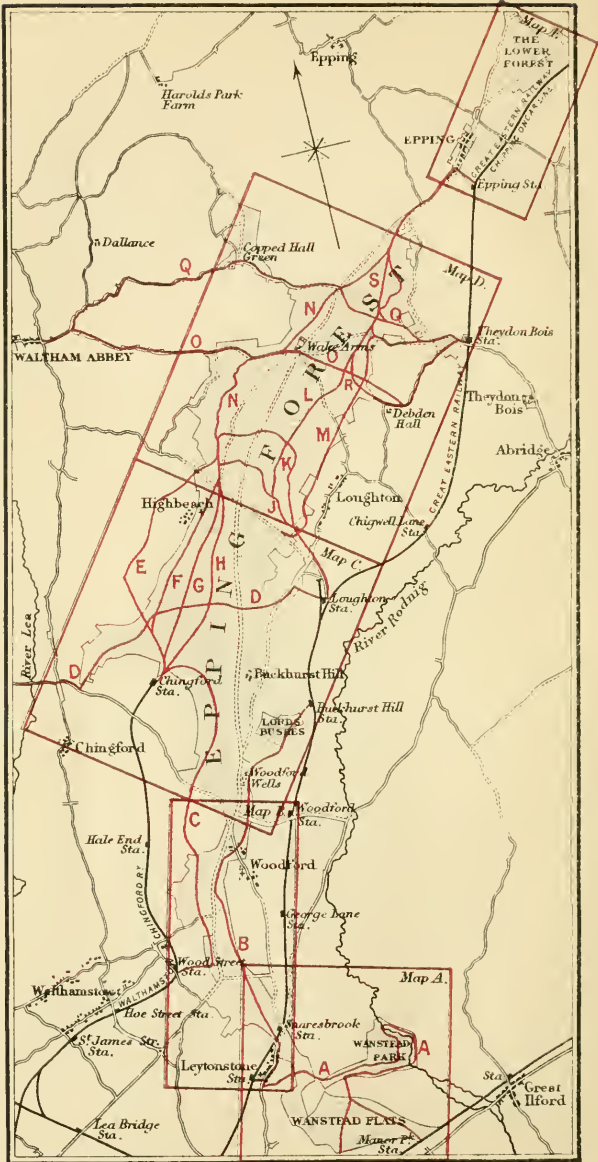
It remains only to say one word as to the future of this beautiful woodland. The Act provides that "the conservators shall at all times as far as possible preserve the natural aspect of the Forest." Such a reminder was perhaps hardly needed. The body to whom this charge has been committed are fully impressed with the importance of providing, for those who live the artificial life of our great city, the means of studying nature where it is unrestrained by art. If there were any fear of their forgetting this, it is probable that they would hear of it from the Essex Field Club—a society which comprises some hundreds of members more or less interested in natural history, and who bring to bear a vigorous public opinion in favour of the preservation of all the wild life which finds a home in the "waste." It is in its varied aspects that the greatest refreshment is to be found for the eye

and the brain, weary of dead walls and the turmoil of streets. The general opinion, so unmistakably evinced, that the Forest shall remain a forest and not be civilised into a park, is but the expression of a true instinct. May the people of London, from generation to generation, continue to draw full drafts at Nature's source, and to profit by all the lessons which she teaches.



BORDER FROM THE "TENISON" PSALTER, A.D. 1284.

EPPING FOREST



Scale 1/2 in.: 1 Mile

Stanford's Geog. Estab^t

EPPING FOREST.

ITS TOPOGRAPHY.

“ I advise them to study large scale maps.”

THE MARQUIS OF SALISBURY.

THE routes which I have attempted to describe in the following pages lead through what I consider, after roaming through the Forest all my life, to be its most beautiful glades and thickets, but I by no means claim to have exhausted its charms. On the contrary, even with the intimate knowledge of every part which I have acquired, I almost daily light on some picture which I have never before observed. Still more will the discerning visitor be constantly tempted to diverge from the lines I have indicated, and discover fresh scenes for himself. That he will be amply repaid I do not doubt.

I have, as a rule, avoided the more formal roads, and sought the by-ways, where nature has had the freest play, and in these, owing to the absence of landmarks visible from the denser thickets, it is difficult to give clear and unmistakable directions. The numerous tracks which intersect one another are trodden out aimlessly by cattle, and are consequently more confusing than useful as

definite guides. It is, therefore, probable that many will wander from the trail without intending to do so. To those who are not blessed with a bump of locality, and who fail to follow my descriptions, I commend a close attention to the maps, which are, I think, as clear and accurate as it is possible for the scale of 3 inches to a mile to be.

The intersecting lines, which divide them into squares of an inch and a half, are arranged in the direction of the four points of the compass. They are for the combined purpose of readily estimating the distance,—each side of a square representing exactly half a mile,—and of showing the direction, at a glance, to those who carry a compass, a practice which I strongly recommend.¹

I have also here and there cut the distinguishing letter of the route on the stem of a tree by the path I am indicating, but I hope this will not be taken as a precedent justifying the practice of engraving initials and love emblems in similar positions.

The greater number of visitors to the Forest come by railway. I have, therefore, as a rule, started and terminated each route at stations, generally on the same line of railway. The timetables of the Chingford and Loughton Railways are given in an Appendix on page 138. They are seldom altered, and may be relied on with tolerable confidence. On bank holidays trains run every quarter of an hour. Return tickets to Woodford and all stations beyond it are available from Chingford for the return journey.

¹ Messrs. Negretti and Zambra, of Cornhill, have undertaken to make an excellent pocket compass in a brass case, which will be sold for 1s. for use with this Guide.



It is obvious that the intelligent reader will be able to combine two or more of the routes to form a more extended expedition. Thus, after taking route G to High Beach, he can follow route K to Loughton, or route H to Epping.

The small figures on the maps show the height in feet above high-water mark. The routes described are indicated by the red lines. Hard gravelled roads are coloured yellow.

The small scale index map opposite page 27 shows the position of all the railway stations relatively to the Forest. It also shows, for the benefit of those who drive, the chief roads of approach from London and Stratford.

It should be borne in mind that the days when east wind prevails are the best for selecting those routes that command distant views. Winds from the west or south come laden with London smoke which obliterates them.

ROUTE A.

LEYTONSTONE TO WANSTEAD PARK AND FOREST GATE.

5 $\frac{1}{4}$ miles.

On leaving Leytonstone Station, cross the High Street, by the Red Lion Inn, and follow Harvey Road at right angles to it. This leads to the *Avenues* in 300 yards. These were planted 150 years ago by Sir Josiah Child, and are now, unfortunately, in a very decaying condition. They are but the remnant of a large number which radiated in several directions from old Wanstead House,

and formed the approach to it. In the plan of Wanstead, as it was in 1745, they are well shown, extending as far as Snaresbrook pond.

Crossing the *Avenues* in an easterly direction to the road from Wanstead to Forest Gate, the entrance to the western arm of Wanstead Park is reached. [The same point may be reached by those driving or walking from Stratford by turning to the right out of the High Road, either along *Cann Hall Lane* or at *Harrow Green*, or by *Davis's Lane*. From Snaresbrook the park is reached by the new entrance road out of Red Bridge Lane, near Wanstead Old Church.] (For a history of the park, see p. 54.) Following the footpath through the *Reservoir* wood, the *Shoulder of Mutton* pond, the *Heronry* pond, and the *Perch* pond are passed in succession on the right, and the refreshment chalet on the left. Two hundred yards beyond the latter the footpath enters the beautiful woods which surround the *Great Lake*, and conducts to the old boat-house and the so-called grotto¹ above it, of which more need not be said than that it is a specimen of the style of landscape-gardening in fashion in the last century. The domed chamber is encrusted with shells and a mixed collection of stalactites, crystals, and looking-glasses. The best part of it is the view from the window. A glance at an old map shows that the river Roding formerly flowed through this lake, which was then at a lower level. At a subsequent date a course which now bounds the Park on that side was cut for it, to enable the level of the lake to be raised—an operation which had the effect of widening the channels and

¹ Burnt down, November 1884.

partly submerging the curious structure called the "Fortification." Previous to this alteration the straight cut canal-like branch of the lake, pointing east and west, gave a watery termination to the broad and formal vista from Wanstead House. From a plan, dated 1735, in the possession of the Trustees to the Earls of Mornington, and prepared by a French landscape-gardener named Roche, who seems to have derived his inspiration from the gardens of Versailles, it appears that several other rectangular sheets of water of a similar character were designed, some of which could never have been completed.

From the grotto the path follows the verge of the lake [near the north end of the lake a path on the left leads to the high road to Snaresbrook Station] and, circling round its northern end, returns by the opposite side, passing the *Lincoln Island*, upon which is the heronry. Formerly the herons preferred the island in the upper pond, to which they gave its name, but many years ago they migrated to *Lincoln Island*, and have ever since built their nests in comparative seclusion on the tops of its highest trees. It is much to be hoped that the crowds who now assist at the spectacle will not give them notice to quit. To ensure the necessary seclusion the path on the north side of the lake is sometimes closed in May and June. To complete the circuit of the lake is a walk of rather more than a mile. To reach Manor Park or Forest Gate Stations, follow the southern boundary of the Park as far as the new road, which, as I write, is not yet commenced, but which, it is hoped, will soon be completed; this leads to Wanstead Flats, on the opposite side of

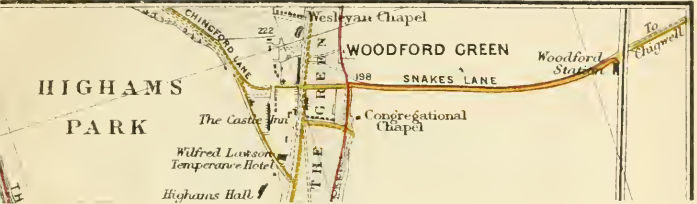
which, in a southerly direction, is Forest Gate Station. If bound for Manor Park Station turn to the left on reaching the Flats, and opposite the gates of the Cemetery strike across the eastern corner of the Common.

ROUTE B.

LEYTONSTONE TO WOODFORD OR BUCKHURST HILL.

$4\frac{3}{4}$ miles to Woodford; $5\frac{3}{4}$ miles to Buckhurst Hill.

After leaving Leytonstone Station, follow the High Street to the north for a quarter of a mile. Immediately after passing the Workhouse School on the left, cross the railway, and enter the Leyton Flats—a level open space, much broken by old gravel pits, and covered with patches of gorse and broom. It is almost free from trees, and the few that are left have been seriously stunted and injured by the reckless gravel-digging of recent years. Passing to the left of a small clump of trees, follow a broad green roadway which leads due north, and, leaving the Infant Orphan Asylum on the right, cross the Eagle Road at right angles. Leaving the Forest School on the left, *Gilbert's Slade*, a wide grassy glade, flanked by thickets of hornbeam and holly, and rather swampy in winter, conducts to the Woodford Road and Woodford Green. To reach Woodford Station, turn to the right, opposite the Castle Hotel. To continue the walk to Buckhurst Hill Station, follow the length of the Green, keeping to its eastern side, where a shady walk under chestnut trees is preferable to the High Road. From the north-eastern corner





of the Green Monkham's Lane leads in 500 yards to an isolated block of forest known as *Lord's Bushes*, conspicuous for its picturesque oaks and beeches, and dense undergrowth of hollies. A well-defined track crosses this from the end of *Monkham's Lane* to Buckhurst Hill Station, at its north-east corner, but an hour may be well spent in exploring its beautiful glades. Another track from the same point crosses it diagonally in a northerly direction to the top of Buckhurst Hill.

ROUTE C.

WOOD STREET STATION TO CHINGFORD.

5½ miles.

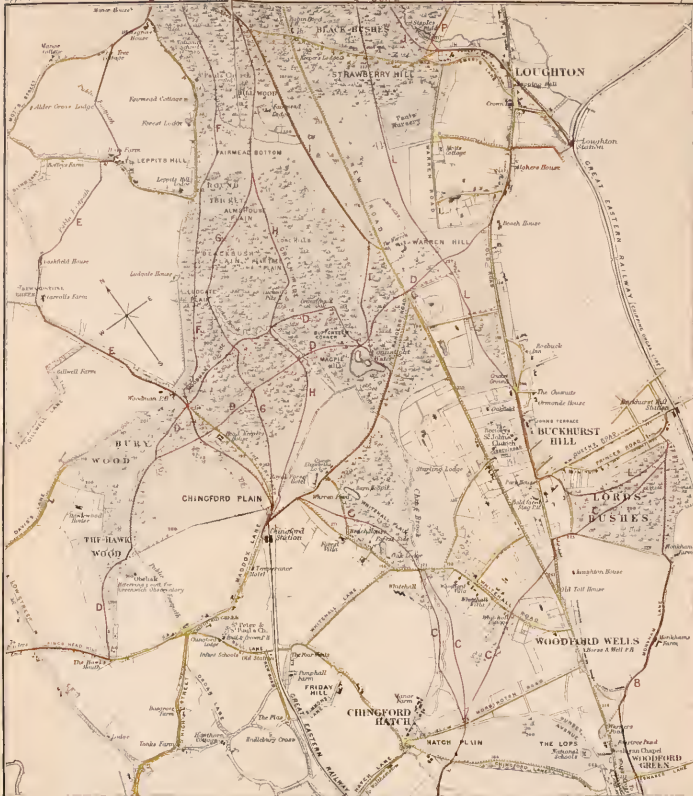
On leaving the station turn immediately to the left by *Upper Walthamstow Road* and follow the lane which leads up the hill to the eastwards and enters the Forest near St. Peter's Church, 400 yards from the station. This point may also be reached from Leytonstone by crossing the Leyton Flats as in Route B, but keeping somewhat more to the left, and crossing the Eagle Road at Forest Rise. From here follow the wide grass glade to the north as far as the Allotments. These, together with the land belonging to the East London Water Works, constitute a barrier across the route which necessitates a detour to the right as far as the high road. I have endeavoured, hitherto without effect, to persuade those who are responsible for these enclosures to allow the public right-of-way to be restored.

Regaining the line by *Hagger Lane*, from the corner of the Forest opposite the gate of the Allot-

ments, a ride commences which may be identified by the distinguishing letter of this route marked on a pollard tree which stands by the opening to it. This leads over picturesque broken ground, and through a dense growth of holly and deciduous trees, in about $\frac{3}{4}$ mile, to Hale End Road. [From this point a pretty path along the eastern side of Higham Park leads to Woodford Green.] Crossing the road, enter the *Sale*, a green lane skirting the lower side of Mr. Courtenay Warner's Park, and separated from it by the *Ching Brook*. This leads in $\frac{1}{2}$ mile to a wide open grass slope, which separates Woodford Village from Chingford Hatch. The upper portion of the slope commands a striking view over the valley of the Lea. The stream of the Ching may be followed up on either side. Its right bank, *i.e.* its left looking up stream, is prettily wooded, but the other affords the driest and soundest walking after wet weather. Immediately after passing Whitehall Road Bridge, which must be crossed if one is on the right of the stream, leave the latter and pass close to the right of Forestside Cottages. Passing through the grove of old pollard oaks, near Queen Elizabeth's lodge and the Forest Hotel, Chingford Station comes in sight. There are points in this walk which are decidedly swampy. I should be sorry, however, to discourage a trial of it, even in winter. In summer it is generally quite hard.

This route may be varied, by those who want to take the train at Buckhurst Hill, by diverging to the right soon after passing Chingford Hatch. Ascend the hill, and, crossing in succession the Whitehall Road and the Epping Road into the Loughton Road, follow this to the north for 100





yards, and turning to the right, immediately after passing Knighton Villas, strike diagonally across Lord's Bushes in an easterly direction, by a forest path which enters this piece of forest between two old pollard oaks at its south-west corner, and which leads to Buckhurst Hill Station.

ROUTE D.

PONDER'S END STATION, ON THE GREAT EASTERN MAIN LINE, TO CHINGFORD OR LOUGHTON.

2 miles to Chingford ; $4\frac{1}{4}$ miles to Loughton.

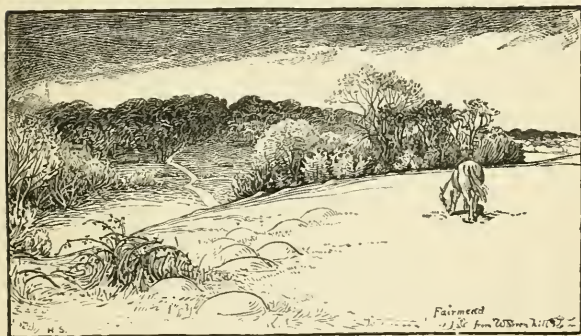
A road leads eastwards from the station across the meadows which border the River Lea. A mile from the station the Sewardstone Road, locally known as *Low Street*, is crossed at right angles. Four hundred yards beyond this, "*The Hawks-mouth*," a narrow opening to the Forest on the left of the road, is reached. Turning in here across an open grass slope, the pedestrian ascends the hill which is crowned by the *Hawk Wood*. Passing over the crest of the hill, and through the wood, he emerges at the edge of the wide open space known as *Chingford Plain*, and from this point the Forest Hotel and Chingford Station, in the hollow to the right of it, are seen about half a mile distant.

The whole of the treeless space here seen was enclosed about 1860, and cultivated, but subsequently restored to the Forest. Though it is covered with grass, signs of its former cultivation are still seen in the ridges and furrows formed

when it was arable land, and which sadly mar its grace. The conservators will be grateful to any one who will suggest a cheap and effectual means of levelling these regular irregularities. To the left of this lies the great mass of the Forest, which extends from here nearly to Epping in a broad belt, 4 miles long, and comprises in one block about 4000 acres, nearly the whole of which is covered with a thicket, more or less dense, of oak, beech, hornbeam, crab, maple, thorn, birch, and holly. The whole of this wild and beautiful wood is worthy of exploration by the visitor, but from the absence of landmarks, and the intricacy of the glades and rides, it is not very easy to indicate clearly the best routes.

The immediate purpose being to cross it to Loughton, follow the highest part of the ridge, which leads in a curved line to the "*Bury Path*," an old forest way from Chingford to Sewardstone, which has recently been gravelled. Crossing this, immediately to the left of the head-keeper's house of red brick, seen on the right front, follow a narrow ride which leads from this point, in an easterly direction, to *Connaught Water*; or else, keeping rather more to the left, enter a picturesque green glade which runs eastwards from the "Woodman's Arms," a small inn on the edge of the Forest. This leads in a few hundred yards to a little winding rill called "*Cuckoo Brook*." Follow its right bank for 100 yards, then cross it by a well-defined track, and ascend the opposite hill to some shallow ponds known as the "*Cuckoo Pits*." Soon after passing these, the visitor, if he does not lose his way in the mazes of this part of the Forest, but keeps his head, and his easterly direction, comes

in sight of *Grimston's Oak*, a fine tree standing alone in a circular clearing. Following the ride, at the end of which *Connaught Water* is seen, the *Ching Brook*, which flows into it, is reached. From this point the *Warren Hill*, across which the route lies, is seen in front. From the top of the hill there is a fine view of that part of the Forest which we have traversed, and as Loughton Station is visible from this point, further directions are needless. Except where the *Bury Path* is crossed, which is muddy after rain, I can conscientiously describe this walk as a dry one.



FAIRMEAD, FROM WARREN HILL.

FROM CHINGFORD TO HIGH BEACH.

On quitting Chingford Station, the visitor at once enters the wide, treeless, grassy space, described in the last route, and sees beyond it the verge of the great thicket which extends from here, without a break, to High Beach, and, indeed, but

for the intersecting roads, to Epping. This Fairmead Thicket is a fair sample of the denser parts of the Forest. The great majority of the trees, (consisting chiefly of oak, hornbeam, and beech) are pollards, but among them there is a considerable number of straight-grown "spear" oaks, of 100 to 150 years' growth, which have never known the axe. In the drier parts of the Forest beeches to a great extent take the place of oaks. These "spear" trees will make fine timber for future generations, provided they receive timely attention by being relieved of the competing growth of the unpicturesque hornbeam pollards. Throughout the wood, between Chingford and High Beach, this has been recently done, to the great advantage of the finer trees, as well as the holly, thorn, and other undergrowths; nevertheless this thicket is still very dense in some parts, and owing to the confused maze of narrow cattle-tracks, it is not always easy to keep the true direction.

The walks to High Beach may be varied to any extent, but I will endeavour to indicate four routes which are tolerably well defined. It will assist the pedestrian to obtain a clear idea of the direction to follow if he will first visit Queen Elizabeth's Lodge, from the upper room of which he will obtain a good bird's-eye view of the district to be traversed. Let him take note of the spire of High Beach Church, which is the best landmark, though, from the inside of the thicket, it is only occasionally visible.

ROUTE E.

3¼ miles.

Cross the Forest by the *Bury Path*, which passes *Hawkwood Farm*, visible from Chingford Station, and now the head-keeper's residence, and is continuous with the Sewardstone Green Road; follow the latter to Sewardstone Green, from the north-east corner of which a green lane leads by *Mott Street* to High Beach; or better still, immediately after leaving the Green and passing Cashfield House on the right, turn to the right by the public footpath which crosses an open field and ascends the hill. Crossing *Leppets Hill Road*, you strike the path again a few yards to the right, by a barn, and from here it leads, in about a mile, to High Beach, close to the new church. Though this is not, strictly speaking, a Forest walk, the views from it over the Lea Valley are so beautiful as to justify me in inserting it here.

ROUTE F.

2½ miles.

Follow the *Bury Path* to a little beyond the head-keeper's house, then turn to the right along one of the several rides which run near to and parallel with the western verge of the Forest. From the point where *Leppets Hill Lane* enters the Forest there is a gravelled road along its edge northwards, though, if the weather is dry, this may be improved upon, by keeping a little more to the right, while pursuing the same direc-

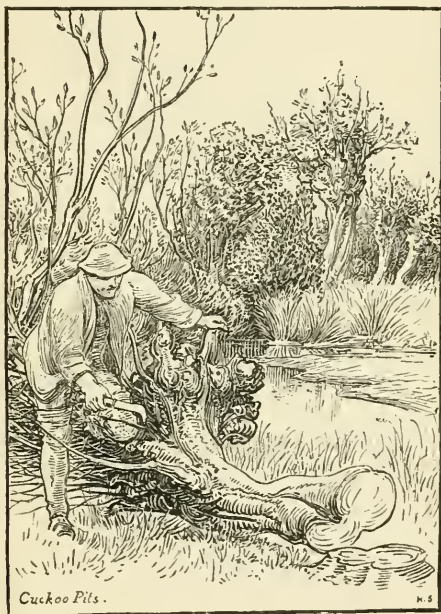
tion, until High Beach is reached through the grove of old beeches. It is popularly supposed that these trees give the name to the place; this is an error, the true meaning of the word being the *High Beach* or *Bank*. This walk and those described in Routes G and H are apt to be swampy. The explorer should be well shod who undertakes them in winter. There is no need for this precaution in summer.

ROUTE G.

2 $\frac{3}{4}$ miles.

The corner of the thicket which approaches nearest to Chingford Station lies due north of it; a few yards to the right of the corner, a bell-mouthed opening shows the entrance to a new ride which has been lately cleared, and which leads in a tolerably straight course (a little to the east of north) to Fairmead Lodge, at the foot of High Beach Hill. About 500 yards from where the thicket is entered, the route leads at right angles into a green glade called the Woodman's Glade. Crossing this, the lower end of *Ludgate Plain*, which may be recognised by the picturesque half-timbered cottage at its upper extremity, is soon reached. Ascending the slope on the farther side of it, the path leads over a gentle rise and through another thicket to a more extensive plain known as the *Almshouse Plain*. From here the wooded slopes of High Beach Hill, crowned by the church spire, become visible in front. The next open plain that is crossed is called *Fairmead Bottom*, and gives its name to the picturesque Fairmead Lodge on the farther side of it—a well-

known place of entertainment for parties of school children from London. On the farther side of the plain, and to the left of Fairmead Lodge, are two glades, either of which leads through the Beech Grove to High Beach Church.



CUCKOO PITS.

ROUTE H.

2 $\frac{3}{4}$ miles.

Keeping rather more to the right than in the last route, but to the left of the straight ditch be-

low the Forest Hotel, enter the wood where a small stream, with a winding course, leaves it. Follow the left side of this for 300 or 400 yards, then cross it and ascend a low rise to the *Cuckoo Pits*. Immediately beyond these the *Green Ride* is entered. This must be followed to the point where it makes a sharp turn at right angles towards Fairmead Road. Instead of turning with it keep straight on to a wide opening in the thicket, visible in front, in the direction of the spire of High Beach Church. After crossing *Almshouse Plain*, ascend the hill to High Beach, leaving Fairmead Lodge on the right.

ROUTE I.

3 miles.

Those who prefer hard road or path to any of the above alternatives must follow the "Ranger's" road past the Forest Hotel as far as *Connaught Water*. Then turn to the left along its margin by the "red path." This leads into the road along *Fairmead Bottom* to High Beach.

ROUTE J.

LOUGHTON TO HIGH BEACH.

2½ miles.

On leaving Loughton Station, keep a straight course by the Station Road, through the village to Staples Pond. Enter the Forest on the left of the pond. A few yards from the head of the pond diverge from the wide green ride by a narrow ride

on the left. This leads over a low rise to a rushy hollow known as *Debden Slade*, a corruption of Dead-man's Slade. Crossing the head of this, the track mounts the opposite hill diagonally to the old British camp and skirts round its south and east sides. From this point a group of tall elms at High Beach are visible and serve as a landmark. Continue along the crest of the hill in a north-westerly direction, so as to keep in sight the beautiful view to the south. From the point at which the Epping Road is crossed at right angles, a green roadway leads to the "King's Oak" at High Beach. This is one of the most beautiful walks in the Forest, but the following variation of it is even more charming, and will serve for the return journey, unless a more extended walk is desired, in which case return to Chingford by one of the routes already described, or to Epping or Theydon.

ROUTE K.

HIGH BEACH TO LOUGHTON.

3 miles.

From near the flagstaff on the High Beach road, half a mile north of the "King's Oak," strike due east across the thicket. This will lead to *Wake Valley*, sometimes called *Dick Turpin's pond*, an irregular sheet of water in a hollow by the Epping Road; cross the road and descend the valley through *Monk Wood*, keeping the left bank of the stream. Where this leaves *Monk Wood* and passes under the *Green Ride* [from this point a pretty track leads north-east up the hill to *Goldings*

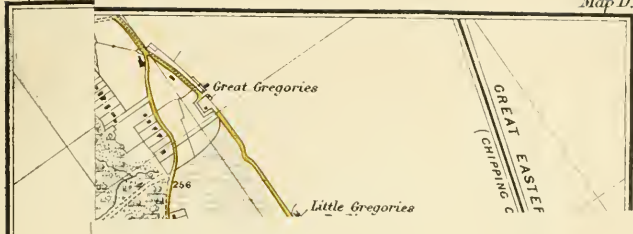
Hill ponds] cross the latter to some cleared spaces beyond. Continue to follow the left bank of the stream downwards till Baldwin's Hill pond is reached. From this point the driest and best track is on its right bank, until it flows in about half a mile into *Staples pond*, whence Route J started. Both these walks are fairly dry even in winter and after rainy weather.

ROUTE L.

BUCKHURST HILL OR LOUGHTON TO EPPING.

From Buckhurst Hill, 7 miles ; from Loughton, 5 miles.

From Buckhurst Hill Station enter *Lord's Bushes* at its north-east corner, and, keeping near its northern boundary, leave it at the north-west corner. Follow the Loughton high road past Buckhurst Hill Church, and, 300 yards beyond this, diverge to the left across the cricket ground. A due northerly course will lead to Warren Hill. Leaving the Warren House, the residence of the Forest Superintendent, on the left, continue the northerly course across some cleared spaces, formerly cultivated, and which will be much improved by planting, and by the green ride along the west side of Paul's nursery. This leads at right angles into the road from Loughton to High Beach, known as *Earl's Path*. A corresponding green ride on the other side of the road descends the hill to *Debden Slade*, a rushy valley, the head of which must be crossed. Ascend the opposite hill to the *British Camp*, described on page 57. (To take this walk from Loughton, follow the directions given in Route J as far as the camp.) From this point, instead of following the hang of the hill, as in





Route J, cross the heathery plateau at the top of it to the high trees of *Monk Wood*. A north-easterly direction will lead the visitor the whole length of the wood. This is considered by many to be the choicest bit of the Forest. Nowhere is there so wide an extent of well-grown trees, alternating with wild rushy plains, and intersected by deep picturesque dells. Cross the Loughton and Epping Road by the keeper's cottage, and descend the hill to the bottom of the next hollow, called "*Hangboy Slade*". Follow this up the stream. The valley runs north at first and then bends round slightly to the north-east. Where the open glade appears to come to an end, an arrow has been cut as a director in the smooth bark of a pollard beech. Here turn to the right through the grove of beech-trees and up a little mossy hollow, until the Theydon Road is reached. On the farther side of this is an open heathery plain nearly bare of trees, owing to forest fires. After crossing the road, keep along near the thicket on the right hand side. The tall firs on the left show the position of *Copped Hall Wood*. Our route lies at right angles to this direction. At the northern apex of the plain a well-defined track is found. This keeps along the side of the hill which slopes down to the left to a little stream, on the opposite side of which stand the fine beeches of "*Epping Thicks*"—probably the best grown trees in the Forest. At the point at which some villas on Piercing Hill come fully into view, 300 yards ahead, turn to the left, down a little hollow, and crossing the intervening stream into the "*Thicks*," rise the opposite slope to the wide *Green Ride*. Follow this ride to Epping.

I am aware that my directions for this walk are

somewhat vague. From the absence of landmarks this is inevitable. It is of course needless to adhere rigidly to the actual route I have attempted to describe, and which is susceptible of a number of variations, but if a general north-easterly direction is preserved from the old *British Camp*, the pedestrian may get bogged or hung up in a thicket, but he cannot go far wrong. It is at any rate well worth trying, for I should be inclined to select it as the most varied and attractive walk of any in the Forest. It is dry in all weathers throughout nearly the whole of its course.

ROUTE M.

LOUGHTON TO THEYDON BY BALDWIN'S HILL AND OAK HILL.

5¼ miles.

Follow the ridge of *Baldwin's Hill* as far as *Golding's Hill* ponds, as described in Route P, or else keep along the bottom of the valley below it, hugging the bank of the stream to the point where it crosses the green ride, and leaves the high trees of *Monk Wood*. From here a track leads up the hill on the right in a direction a little north of east to the above-named ponds. At *Golding's Hill* ponds cross the Loughton road and take the green road along the eastern boundary of the Forest. After descending the hill, this road leads to *Debden Green*, but without leaving the Forest at this point, keep a north-easterly direction near the outside of the Forest, crossing a succession of ridges and valleys to Oak Hill. This part of the Forest is a

favourite resort of the deer. On reaching the Theydon Road, turn to the right and the station is reached in about half a mile. I do not recommend this walk after wet weather. In summer it is hard.

ROUTE N.

HIGH BEACH TO EPPING BY THE VERDERER'S PATH AND AMBRESBURY BANKS.

$3\frac{3}{4}$ miles to the Station.

From the "King's Oak," at High Beach, follow the high road to the north for half a mile as far as the danger flagstaff of the Honey Lane Rifle Range. Here diverge to the left to the edge of the hill, where a large mound has been thrown up to catch stray bullets. From this point a ride, recently opened, follows the crest of the hill in a serpentine course, for about three quarters of a mile, until it enters the road by Woodridden Hill. Follow the road to the right for 100 yards and then turn to the left into the Forest again, here known as *St. Thomas's quarters*, just before reaching the keepers' cottages, which stand on the edge of a small open plain. At the farther end of the plain is the opening of a narrow ride which must be followed. After passing on the left the Forest pound, an enclosure of several acres, surrounded by an unsightly six-foot iron fence, which is intended to serve the purpose of a "field pound," but is rarely or never used, the track strikes across the thicket to the north-east, and steers for the group of tall fir-trees in *Copped Hall*, a landmark which is occasionally visible. It leads into the Epping road

nearly opposite *Ambresbury Banks*, an ancient British Camp described in the following chapter. Its position is indicated by the group of lofty beech-trees which have established themselves on the banks. Immediately to the left of the camp a beautiful glade, arched by fine beeches, leads diagonally from the high-road into the broad "*green ride*" which is parallel to it, and which may be followed to Epping. This walk may be recommended in wet weather, as it leads over high ground and gravelly soil.

ROUTE O.

THEYDON TO WALTHAM BY DEBDEN GREEN.

4½ miles to the Abbey ; 5½ miles to the Station.

On leaving the station, turn to the left along the avenue which crosses *Theydon Green*. Thence the road leads to *Debden Green* in about a mile. A few yards before reaching the latter, at a gate on the right, a notice board indicates that there is a right of way across the field to the Forest. From the point where the latter is entered a broad glade, overgrown with brake fern, ascends the hill. Looking back to the south over Loughton, there is a fine view of the Thames Valley to Kent. At the top of the hill there is a wide plateau, with scattered pollard oaks growing on it, but in summer covered with a dense growth of brake fern. Cross this in a westerly direction to the old roadway known as "*The Ditches*," and which bounds the plateau on the west. On the farther side of this roadway look for a gap in the thicket. This is the top of *Cop-*

ley Plain—a grassy hollow which leads down into the Valley of *Hangboy Slade*, and, continuous with it, a ride ascends the opposite slope to the Wake Arms on the London and Epping road. *Dulsmead Hollow*, which falls into *Hangboy Slade* from the west, 200 yards farther to the left, may be followed instead of this ride, and leads into the Loughton road, close to its junction with the London road at the Wake Arms. From here take the road by *Woodridden Hill* to *Honey Lane*, or else follow for 500 yards the *High Beach* road, which also branches from the *Wake Arms*, and then turn to the right through the thicket. In a few yards the crest of the hill is reached, which overlooks the valley of the Lea. Below, at the foot of the hill, lies the green opening of *Honey Lane Plain*. Descend the hill through the thicket, which is rather dense in this part; and, at the corner of the green, by the covered drinking trough, take the road to Waltham. With the exception of one or two spots this walk also is generally dry.

ROUTE P.

LOUGHTON TO HIGH BEACH BY BALDWIN'S HILL.

5½ miles to complete the circuit to Loughton.

To any one who desires a very dry walk through the best part of the Forest, I can recommend the following circuit by High Beach. It follows the road nearly the whole way, but keeps the highest ground, and commands charming views of Loughton Manor, the distant Kent Hills, and the Lea Valley. On leaving Loughton Station, pass through the village

to Staple's Pond ; here turn to the right along the road for 200 yards. By the pond ascend the grass slope on the left to a group of fir-trees at the top. From here a lane leads along the crest of *Baldwin's Hill* for half a mile, and commands an extensive view of the densely wooded Loughton Manor. This would be still more interesting if it were not for the reckless and unsparing pollarding to which nearly the whole of this otherwise beautiful wood has been subjected, and which gives it the effect of having been mown with a scythe. It will require many years of careful attention to the most promising pollards, which are here extraordinarily numerous, before it resumes its natural aspect. *Monk Wood*, which has not been so maltreated, is a conspicuous object. Its billowing mass of tall trees rises like an island above the rest. Some sections of the slope of Baldwin's Hill, in the immediate foreground, were cleared of trees a few years ago, with a view to enclosure. A marked effect of this denudation is seen at one spot near the end of the ridge. The whole hillside, which is composed of viscous clay, no longer supported by the roots of trees, has commenced to slip down towards the stream below, producing cracks and fissures and other features in close imitation of an ice stream in the Alps. By *Golding's Hill Ponds* turn to the left along the Loughton and Epping roads, passing *Monk Wood* on the left. At the *Wake Arms* six roads converge. The one we have traversed leads from Loughton ; the next in order, on the left, from Woodford and London ; the third from High Beach ; the fourth from Waltham Abbey ; the fifth from Epping ; and the sixth from Theydon. Fol-

low the third to *High Beach*; or the fourth, for half a mile, as far as *Woodridden Hill*, and where the road begins to drop down the hill, turn to the left along the *Verderer's ride*, which also leads to High Beach. From High Beach either follow the road to the "*Robin Hood*," and thence by the road known as the *Earl's Path* to Loughton, or, immediately after passing Paul's Nursery, turn to the left by a beaten track, which is a short cut through a picturesque piece of beech-wood to the "*Robin Hood*," and from thence take the *Earl's Path*.

ROUTE Q.

THEYDON STATION TO WALTHAM BY COPPED HALL GREEN.

4 miles to the Abbey; 5 miles to the Station.

Follow the road along the north side of the green, and, immediately after passing the church, turn to the right, in a N.N.W. direction, across the open grass field, where the remains of ridge and furrow show that it underwent a period of enclosure and cultivation before it was restored to the Forest. Where the thicket is entered, at the farthest corner of the field, a tiny stream leaves it. Follow this up, keeping it on the right. Whenever the valley divides into two branches, which it does twice, follow the fork to the right. When it comes to an end pursue the same direction, by compass, until, near some old gravel pits known as "*Wormleyton Pits*," you emerge on a heather-clad space comparatively free from trees. From this point the *Copped Hall* group of Scotch firs, with a single

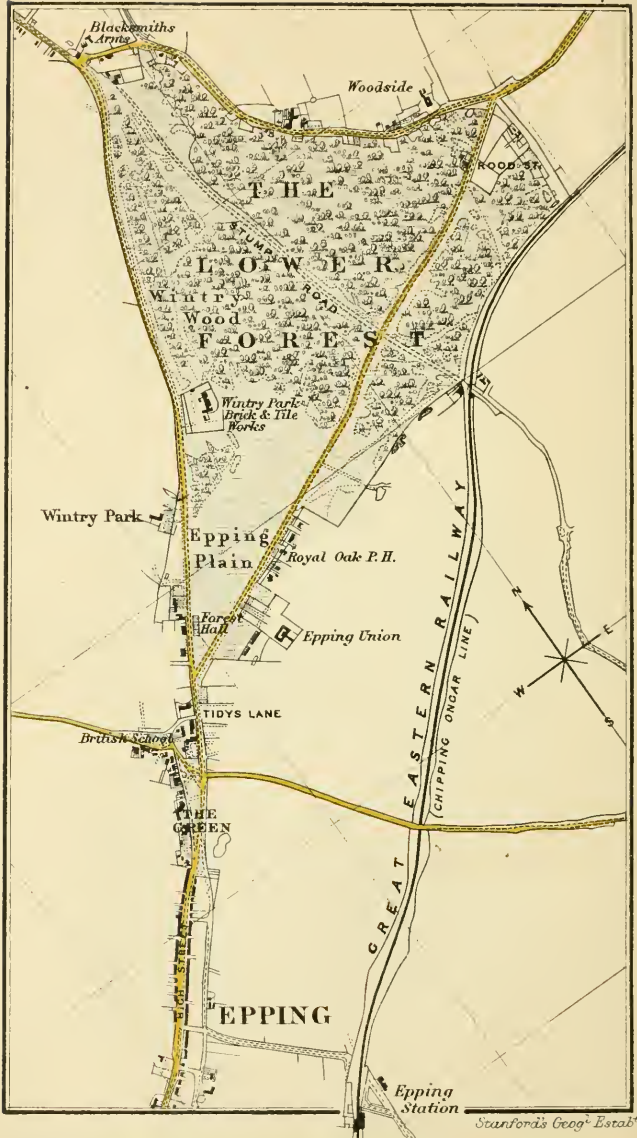
columnar silver fir towering above them, to which I have referred in previous routes, is seen about half a mile in front. Taking this as a landmark, and steering as straight for it as the intricacies of the thicket will admit of, it will guide you past *Ambersbury Banks* to the point on the Epping road where the Waltham road leaves it. Follow the latter past the *Copped Hall* entrance gates, and *Copped Hall Green* to Waltham. This is a tolerably dry walk all the year round.

ROUTE R.

THEYDON TO HANGBOY SLADE.

4¼ miles to complete the circuit to Theydon.

From Theydon Station take the road to *Debden Green*. From its north-west corner a lane leads into the Forest. At the point where this is entered the small stream which flows from the valley of *Hangboy Slade* leaves it. If the course of this stream be followed upwards, keeping always near the bottom of the hollow, it will lead, in about a mile, to the Theydon road. Crossing this and the open heathery plain beyond it for 400 or 500 yards, turn to the right into the thicket, and, keeping a S.S.E. direction, *i.e.* parallel to the Theydon road, come out on to *Theydon Green* near the church. This very pretty circuit should be reserved for dry weather. It is easily identified by following the hollow upwards. I have only partially indicated it by a red line on the map, lest it should be confused with other routes which intersect it.



ROUTE S.

THEYDON TO EPPING.

2 $\frac{3}{4}$ miles to the Station.

Follow the road past the church as directed in Route Q. Cross, in a N.N.W. direction, the green beyond it, as described in the last route. On entering the thicket, and after following up the right hand side of the little water-course for a few yards, turn to the right up the hill, whence a track to the N.N.E. leads to Piercing Hill, near some villas on the right. From here the tall red water tower at Epping comes in sight. Keeping a point or two to the left of this landmark, traverse the little stream at the bottom of the hollow, and pass through "*Epping Thicks*" to the town of Epping.

ROUTE T.

THE LOWER FOREST.

This very pretty wood, of about 300 acres in a triangular block, is isolated from the rest of the Forest, and lies just beyond the town of Epping. I shall not attempt to describe any routes through it, as they would be difficult to identify. But a summer's afternoon may be well devoted to its exploration; I say summer advisedly, as parts of it lie low and swampy. An ancient bridle-way, at one time the high-road from Harlow to London, known as the "Stump Road," bisects it from north to south. *The Lower Forest* lies between Epping and North Weald Station, and equidistant from them. The prettiest road from the former station is that which passes through Coopersale; the shortest through the town of Epping.

OBJECTS OF INTEREST WITHIN AND
AROUND THE FOREST.

A monk ther was, a fair for the maisterie ;
An out-ryder, that loved venerye . . .
He gaf not of that text a pulled hen
That seith that hunters be noon holy men . . .
Greyhoundes he had as swift as fowel in flight :
Of pryking and of huntyng for the hare
Was al his lust.—*The Canterbury Tales.*

WANSTEAD PARK.

I AM indebted to my brother yerderer, Mr. Andrew Johnston, for the following note on Wanstead Park :—

Wanstead Park has a history exceeding in interest any other part of the Forest. Just above the round pond, called the Basin, is the site of the great mansion, erected by the first Earl Tylney in 1715. Old maps of the neighbourhood show avenues radiating from the house in all directions, those to the north-west extending as far as the Eagle at Snaresbrook, and there appears to have been little distinction at that time between the Park and the surrounding Forest. The avenues were planted for the Earl's father, Sir Josiah Child, under the direction of the famous John Evelyn of Watton, the author of *Sylva*, who informs us "of Sir Josiah Child's prodigious cost in planting walnut trees about his seat, and making fish-ponds many miles in circuit in Epping Forest on a

barren spot." The splendid mansion built by Sir Josiah's son in 1715 was the work of Colin Campbell, the celebrated architect, and author of *Vitruvius Britannicus*. Horace Walpole speaks of him and the place in a letter to Richard Bentley, dated 17th June 1755:—"I dined yesterday at Wanstead: many years have passed since I saw it. The disposition of the house and prospect are better than I expected, and very fine. The garden, which, they tell you, cost as much as the house, that is £100,000, is wretched; the furniture fine but without taste. . . . The present Earl is the most generous creature in the world. In the first chamber I entered he offered me four marble tables that lay in cases about the room. I compounded, after forty refusals of everything I commended, to bring away only a haunch of venison. I believe he has not had so cheap a visit a good while. I commend myself as I ought; for, to be sure, there were twenty ebony chairs and a couch and a table and a glass that would have tried the virtue of a philosopher of double my size." In 1775 Harrison visited the house and thus describes it:—"Before the front of the house is a long vista that reaches to the great road at Leighton Stone; and from the back front facing the gardens is an easy descent that leads to the terrace, and affords a most beautiful prospect of the river, which is formed into canals; and beyond it the walks and wildernesses extend to a great distance, rising up a hill, on the top of which the sight is lost by the woods, and the whole country, as far as the eye can reach, appears one continued garden. What a pity it is so fine an edifice, in so beautiful a situation, should be discarded by its possessor!

and that a building calculated for the residence of the greatest subject in Britain should be inhabited only by a few servants."

The Earls Tylney were Hereditary Lords-Warden of the Forest, a dignity which descended to their successors in estate until the Epping Forest Act, 1878, deprived them of it. In 1784 the last Earl Tylney died, and Wanstead came to the Tylney Longs, whose heiress married the Hon. Wellesley Pole, immortalised by the well-known line in *Rejected Addresses*—

"Long may Long Tylney Wellesley Long Pole live!"

In the neighbourhood of Wanstead, however, Mr. Wellesley does not need *Rejected Addresses* to keep alive the memory of his extraordinary career. Such was his reckless prodigality that, having acquired by his marriage a rent-roll in Essex alone, raised under the influence of war prices to £70,000 per annum, he was within ten years of that time obliged to escape down the Thames from his creditors in an open boat. His wife died broken-hearted, the custody of his children was taken from him by the Court of Chancery, Wanstead House was pulled down,¹ and, though he had succeeded in the meantime to the headship of his own family as Earl of Mornington, he died a pensioner of his younger brother, the great Duke of Wellington. The estates came to his son, an estimable gentleman, but one who lived chiefly abroad and took no interest in them. Mortgaged up to the lips, the broad acres about Rochford,

¹ The only relic of the house, so far as I know, existing in the neighbourhood is the white obelisk in the grounds of the Warren House, the residence of the Forest Superintendent.

Ongar, Halstead, and elsewhere were sold. The remnant of the property the last earl left away from his mother's family to his cousin on the father's side, the late Earl Cowley. The great increase in building value of property so near London is, under good management, gradually restoring the estate.

After being shut up for a great number of years, in 1880 the ornamental portions of the Park, comprising the woods, water, and heronry, were acquired by the Corporation of London in exchange for several pieces of Forest land, of great value for building, but of little or no use to the public, £8000 being paid in addition as a make-weight. The whole has been added to the Forest, but the grounds round the great lake are closed at night. Unfortunately the direct and natural access to this recreation ground from Snaresbrook Station by Wanstead Church was not acquired. The visitor from this direction must leave that on his right, and follow the road towards the river Roding until he finds the gate. A convenient exit has been provided near Mornington Villas, opposite what remains of Evelyn's Avenues, and accessible from Forestgate Station across Wanstead flats, or from Leytonstone by the Avenues, so that the tour of the grounds can be made in either direction without retracing steps.

AMBRESBURY BANKS AND LOUGHTON CAMPS.

These two ancient camps are in the heart of the Forest, and owe their state of preservation in some measure to that fact, and their consequent immunity from the levelling action of agriculture. *Ambresbury Banks* lies about a mile south of the town

of Epping, and close to the high road (see route N); the latter on a buttress of the ridge to the north of *Earl's Path* (see route P). Antiquarians have been much exercised about the origin and date of these earthworks; but their speculations have been to a great extent set at rest by the explorations conducted by the Essex Field Club in 1881 and 1882, under the able guidance of General Pitt-Rivers, and other experienced members of the club. Popular tradition attributes the origin of Ambresbury Banks to Queen Boadicea, and places the site of her final overthrow by Suetonius in this neighbourhood; but in the opinion of those best qualified to give one, there is no reliable evidence of this. On the other hand the verdict of General Pitt-Rivers is that this camp is undoubtedly of British origin, but whether erected before or after the Roman Conquest there is no sufficient evidence to show. The data upon which he founds this conclusion are, first, that the configuration of the ramparts is adapted to the features of the ground, instead of being constructed geometrically, which is the distinguishing feature of Roman camps; and secondly, the nature of the fragments of pottery and flint chips which were discovered in digging a section through the rampart and ditch. Those fragments which were discovered under the rampart itself, and upon the ancient surface-line, are necessarily of the same date as, or older than, the camp itself; and their character indicates a British origin. If the Romans had had any hand in the structure, it is all but certain that some remains indicating a higher civilisation would have been found in this part of the excavation. The height of the rampart appears to have been originally 10

feet, and the ditch of corresponding depth. Both height and depth are much diminished by the denudation of ages.

The *Loughton Camp*, which is distant about 2 miles south-east of *Ambresbury Banks*, is a smaller intrenchment containing 11 or 12 acres, but not so well defined; and is besides covered and partly concealed by a dense growth of beeches dwarfed by pollarding. There is even less symmetry of outline; and the constructors seem to have been guided solely by the desire to take advantage of every inequality for purposes of defence. To this the commanding nature of the site—a promontory projecting from a level ridge, and overlooking the marshy valley of *Debden Slade*, more than 100 feet below it—lends itself. Rabbits and foxes have taken advantage of the bank, and their operations have added to the destructive effects of time.

In the course of the investigation of the camp by the Essex Field Club, similar sections as in the case of *Ambresbury* were cut through the rampart and ditch, so as to expose the old surface-line, or the original floor of earth upon which the bank was piled. Here also were found many flint “chips” and fragments of a primitive kind of hand-made pottery, pointing to a British origin. The excavation showed that the section of the ditch in both camps was V-shaped, instead of the more common flat-bottomed form. General Pitt-Rivers says that the evidence before him is “sufficient to identify the camp as pre-Roman, and probably of a very early period.”

The view from this point towards the south is one of the most extensive and beautiful in the Forest.

GREENSTED CHURCH.—Although five miles

from the nearest part of the Forest, the interest which attaches to this church, both from an antiquarian point of view, and for the lover of the picturesque, perhaps justifies its mention here. Situated near Ongar, the terminus of the Woodford railway, it is best approached on foot from that town by a wide and straight grass avenue about a mile in length, which is terminated by the red brick gables of Greensted Hall, close to which the church stands. The structural curiosity of the church lies in the walls of the nave, which are built of solid stems of oak-trees set upright, and tied together by tongues of wood let into perpendicular grooves at the edges of contact, a form of construction which, in the opinion of the learned, supports the belief that this part of the church dates from the Anglo-Saxon period, and renders it improbable that any part of it could have been taken out and renewed. The interior of the solid wooden wall thus formed has been brought to a plane surface by the adze, the marks of which are clearly traceable. Outside, the whole round sections of the trees are left rough, and their exposed surfaces are furrowed by the action of the weather into ridges and deep grooves in the direction of the grain, but are otherwise uninjured by the thousand years of exposure which they have probably endured, except that when the church was under repair in 1848 their lower ends were found to be partially decayed, and were cut off and replaced by a brick sill. The church is dedicated to the martyr-king St. Edmund, whose body rested here for one night, when, more than a hundred years after his death, it was carried to Bedrickesworth, now called Bury St. Edmunds, from London,

whither it had been transported for safety in the stormy times before the Conquest, Greensted lying on the ancient road from London to Suffolk. The incident is thus referred to in an old chronicle of the Abbey of St. Edmund:—"His body was likewise entertained at Aungre [Ongar], where a wooden chapel erected to his memory remains to the present day." Edmund, who was more of a saint than a soldier, but had the courage to say to his conquerors, the Danes, who offered him his life if he embraced the religion of Odin and gave up half his kingdom, "You may destroy this frail body, but know the freedom of mind shall never bow before you," was bound to a tree and shot with arrows. It is related that, when the church was under repair in 1848, and the ancient timber lay on the ground, the old oak-tree near Eye, in Suffolk, to which tradition had always attached the scene of the martyrdom, fell to the ground, and, being cut up, an arrow-head was found embedded more than a foot in depth in the solid timber, and that the annual rings of growth showed that more than a thousand years had elapsed since it struck there.

It is a very pretty walk or drive of five miles from Greensted to Epping by Toot Hill and Ongar Park Wood.

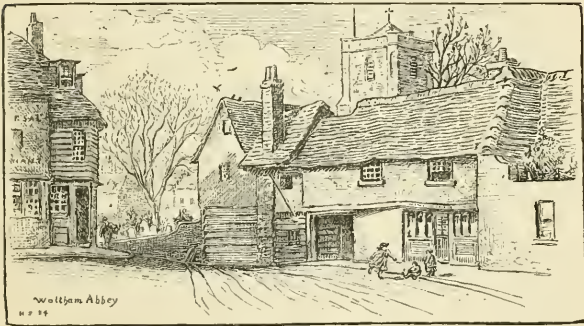
OLD CHINGFORD CHURCH, which stands in a dismantled condition about a mile to the south of the present church on Chingford Green, is devoid of antiquarian interest, but is remarkable for its fine position, commanding a striking view over the valley of the Lea into Hertfordshire and Middlesex, and for the extraordinary trees of ivy, of great age and girth, which hide and protect the moulder-

ing walls and roof. The spires and chimneys of Hackney and Walthamstow, seen dimly through a curtain of London smoke, are not an unpicturesque element in the view.

QUEEN ELIZABETH'S LODGE is a building of the Tudor period, constructed of massive timbers filled in with brickwork and plaster. It is popularly believed to have been the hunting resort of the Virgin Queen, and there is inherent probability in the tradition, though it is not confirmed by contemporary historians. All true foresters believe further that she was in the habit of riding up the staircase and dismounting at the top. Nor would this be a very difficult feat, as each step is a solid oak beam, and they are laid in short flights and at a moderate angle. On the first floor the bedrooms contain some curious old tapestry, but the chief feature of the Lodge is the large room which occupies the entire second floor. The timbers which form the walls and arched roof are black with age, and give a venerable appearance. From the windows there is an extensive view over that part of the Forest which lies between Chingford and High Beach. The house is kept by a widow of a former keeper, and is partly used as a place of entertainment for parties of teachers or children.

THE ABBEY OF THE HOLY CROSS OF WALTHAM, or rather the nave of it, is all that remains of the departed glories of the abbey, whose inmates exercised powerful sway over much of the adjoining country. The Forest formerly extended around it on the upland side, as the name, *Weald-ham* or Village in the Forest, shows. The River Lea, in very early times, formed a broad estuary on the other side, and it is related that, when the Danish

ships lay at anchor here, while their owners were busy despoiling the country, King Alfred, by diverting the stream above or deepening the channel below, or by damming out the tide at Blackwall, left these ships high and dry, so that the Danes had to sacrifice them and save themselves by an overland flight. The spot originally derived its sacred character and its name of Waltham Holy Cross from a cross discovered by a holy man in Somersetshire, and thence miracul-



WALTHAM ABBEV.

ously transported to Waltham by oxen, acting under divine guidance. Tovi, standard-bearer to Canute, thereupon founded a church and religious establishment. King Harold greatly enlarged and enriched the foundation, and hither, tradition says, he came to pray before he went forth to meet the Normans, and hither his body was brought for burial after he was killed at the battle of Hastings. His tomb was within the chancel, inscribed with the words "Haroldus Infelix," but the destruction

of this part of the building left it in the open air, and the stone which marked the spot was removed by depredators. It is said that in the reign of Queen Elizabeth, a gardener digging came upon the stone coffin itself, which being opened the bones were discovered, but crumbled to dust on exposure to the air. The monks for many generations continued to exercise the powers and privileges granted to them, with varying fortunes, dependent on the favour or the contrary, of kings, whose resort this monastery frequently was. Their influence was no doubt in many ways beneficent, and it is probable that we enjoy even at the present time some of the fruits of their arbitrary power. It was to the special permission to enclose, referred to on p. 105, and to the foresight often shown by the religious orders, that we probably owe the preservation as timber trees of the fine groves of beeches in the Forest, known as Monk Wood and High Beach Grove. Their relations with the surrounding people were not always of the most friendly character. Then, as now, rights of pasturage caused differences of opinion, though the following extract seems to show that they were not always so successfully championed as at the present day. Farmer, the historian, relates how, "when Simon de Seham was abbot, in the 30th Henry III. (1245), a dispute arose between the abbot and the townsmen of Waltham about the common lands. The men of Waltham came into the marsh, which the abbot and his convent formerly enjoyed as several to themselves, and killed four mares, worth forty shillings sterling at least, and drove away all the rest; the abbot was politely pleased for the pre-

sent not to take notice thereof. Next year the same men of Waltham went to the abbot the Tuesday before Easter, in the name of the whole village, and demanded of him to remove his mares and colts out of the marsh. This the abbot refused to do, adding that if his bailiffs had placed his cattle otherwise than they ought, they might do well to have it amended, and yet so as to defer the matter till the Tuesday after Easter. On that Tuesday, Richard, brother to the King, Duke of Cornwall, came to Waltham, at which time both the men and the women of the town repaired to the gate of the abbey to receive the abbot's final answer.

“He put them off with the information that he was preparing for a journey into Lincolnshire to meet the justices itinerant, and said that he would settle the affair at his return. Not satisfied, they went into the pasture, and, in driving out the abbot's mares and colts, drowned three worth twenty shillings, spoiled ten more to the value of ten marks, and beat the keepers, who resisted them, even to the shedding of blood. Fearing, however, that they should be prosecuted on the return of the abbot, they desired a ‘love day,’ and offered to pay damages for the injuries committed; but, instead of doing so, they went to London and accused the abbot to the king of having wrongfully taken away their common land, and bringing up new customs, adding that he would ‘eat them up to the bone.’ The abbot then excommunicated the men of Waltham, and they impleaded him at common law for appropriating their common land to himself. They were unsuccessful, and after a long suit in the King's Bench, were glad to confess that they had

done wrong, and they were amerced twenty marks, which the abbot remitted, and, on their submission, he *assoyled* them from the excommunication."

Waltham Abbey did not escape the heavy hand of Henry VIII., but, along with the rest of the monasterial foundations, the canons, abbots, and monks passed away, and their rich lands and forestal rights were surrendered to the king in 1540. The present abbey, which is a conspicuous feature from the high ground of the Forest overlooking the valley of the Lea, is but a fragment of the splendid old abbey, enriched and embellished by a long line of kings. As has been already shown, a sanctuary of some sort stood here from very early times. The abbey was completed in the 11th century, but many additions continued to be made to it by pious worshippers, until it was shorn of its glories at the time of the surrender. What remains of it is said to be "the earliest undoubted specimen of the Norman style of architecture now existing in England."

Originally in the form of a cross, with a massive tower rising out of the intersection of the nave and transept, all but the western part of the nave was either destroyed or fell to the ground when left unsupported by the rest of the structure. The work of destruction must indeed have been carried out eagerly for us to find this extract from the church-warden's accounts in 1556: "Anno 1556. *Imprimis* for coles to undermine a piece of the steeple which stood after the first fall, 2s." The present building has been carefully restored in recent years, and some of its ancient beauty again brought to light. The columns, each one differing from its neighbour, are well shown in the accom-

panying illustration. The crypt, which Fuller, the historian of the abbey, and, for a short time, curator of the parish, described as "the fairest that ever I saw," the Lady chapel, recently restored by Sir T. F. Buxton, and the many curious monuments of worthies who have lived and died under the shadow of the abbey, are worthy of note.

EPPING FOREST.

ITS ANIMALS.

“The heath-stalker, the strong-horned stag—seeks shelter
in the wood.”—*Song of Beowulf.*

“The mole has made his run,
The hedgehog underneath the plantain bores,
The rabbit fondles his own harmless face,
The slow-worm creeps, and the thin weasel there
Follows the mouse, and all is open field.”

Aylmer's Field.

WE learn from an old writer that the beasts of the chase “were commonlie the bucke [fallow], the roe, the fox, and the marterne. But those of venerie in old time were the hart [red deer], the hare, the bore and wolfe; but as this held not in the time of Canutus, so instead of the wolfe the beare is now crept in, which is a beast commonlie hunted in the east countries, and fed upon as excellent venison, although with us I know not anie that feed thereon or care for it at all.” Though some of the animals here mentioned have disappeared from these realms, there is still prolific wild life in these thickets which lends them an additional attraction. We owe the preservation of the Forest itself to the fact that it was formerly kept for the free range of beasts of chase, and

it is fitting that we should pay them every attention. The greatest care is therefore taken to guard them from molestation. Guns are not allowed to be used. The result is seen in unusual fearlessness, especially of many of the birds, such as wild ducks. In the following memoranda on the animals and birds I have limited my observations to those characteristics which may be noted



ROE-DEER.

RED-DEER.

FALLOW-DEER.

by any observant eye. I have not included in the list the prairie wolf, of which there is a specimen at the Zoological, which was alleged to have been caught in Epping Forest. According to the story which appeared in *Land and Water* in the summer of 1884, this animal was purchased as a cub by a gentleman living at Leytonstone, from a hay carter, who said that he had caught it with two others in the Forest, and described them as fox cubs. When

the cub grew up he turned out to be an undoubted coayote or prairie wolf. It was conjectured that their parents must have been turned out for fox cubs, and although the gentleman to whom their introduction was attributed has assured me that what he enlarged were undoubtedly Spanish foxes, it is quite possible that some one else may have turned out coayotes, and that they have lived and bred unsuspectedly for some years in the Forest. The story is, however, not sufficiently confirmed for me to include wolves among the Forest animals.

The **Fallow-Deer** are the most conspicuous and distinctive of the wild animals inhabiting the Forest. They have wandered there for many centuries, but are believed not to be indigenous, but to have been introduced by the Romans. No fossil remains are found, although those of roe and red deer are frequently dug up. The deer, both red and fallow, as I have explained elsewhere, were formerly rigidly preserved for the use of the King, but some favoured individuals were allowed to hunt. For instance, Henry III. enacted, "Whatever archbishop, bishop, earl, or baron shall be passing through our forests, it shall be lawful for them to take one or two deer, by view of the forester, if he shall be present; if not, he shall cause a horn to be sounded lest it should seem a theft." Presents of venison were also frequently made in the following form:—"On sight hereof you are to kill and deliver to the bearer for the use of—— one fat doe of this season, for which this shall be your sufficient warrant, and herein you are not to fail." At the beginning of the last century so many demands had been made upon the herd in this way, and by marauders locally known as "Waltham Blacks," that we find in the Court Rolls an order that "the stock of red and fallow being so low that they are likely to be extirpated, no more are to be taken for three years." After this they again increased, and our grandfathers describe them as being visible in large herds between Woodford and Epping by the passengers in the numerous coaches which passed that way, bound for the eastern counties. An old inhabitant writes: "When a boy my father took me for a treat to London. It was a fine summer morn-

ing. We started at four o'clock. I well remember the open plains bordering the Forest swarmed with deer. I am sure there must have been hundreds in sight at one time. This was in the year 1829." Another old inhabitant tells me that he remembers seeing them opposite Assembly Row, near Leytonstone. From encroachments on the area of the Forest, the depredations of poachers, and from the sporting rights of the Crown having been allowed to fall into disuse, the number of the deer diminished greatly from the beginning of the century; until, about the year 1860, there were said to be under ten left alive. Fortunately, before it was too late, attention was called to the subject, and owing to the fostering care of the Rev. J. W. Maitland, and subsequently of the conservators, this unique herd was preserved, and has rapidly increased.

I say "unique," as, though the same breed are found in some parts of Scotland, I believe these to be the only representatives in England of the ancient deer. The herds of tame fallow-deer, which are preserved in so many parks throughout England, differ completely from the Forest breed. The former are chiefly descended from ancestors imported from Germany, and, for the same reason that all domesticated animals vary much more than the same species when wild, namely, that peculiarities are preserved and transmitted, we find in these herds every shade of colour from white and dun to black. The Epping Forest deer, on the contrary, show no such variations. They are all of a uniform dark brown, which appears to be black, except when one is in very close proximity. The mottles and spots which are so conspicuous on lighter coloured fallow-deer are invisible, except to a minute inspection of the skin after death. They are inferior in size to the park deer, and the horns are less branched, but whether this is due, as some think, to in-and-in breeding, or to the superior grazing enjoyed for many generations by the latter, I am unable to say. Their natural shyness is favoured by the density of the cover, which, from the difficulty of penetrating it noiselessly, gives warning of an approaching intruder. So well aware are they when they are concealed, that they will often allow one to pass within a few feet of their hiding-place without stirring. For this reason they are not often seen, and I have known many residents in the habit of traversing their haunts, who have even doubted their existence. There are always plenty within a mile radius of the Wake

Arms, and the tracks of some of the larger bucks can generally be found in soft places, within a short distance of Chingford Station. South of that point they do not now go. The visitor who wishes to get a glimpse of them may generally succeed in doing so, especially when the trees are leafless, by traversing the Forest noiselessly, at dusk, and up wind in the neighbourhood of Monk Wood, St. Thomas's Quarters, or the Theydon Thicket, especially the latter.

It may be said that in olden times the Forest was preserved for the sake of the deer, for the king to take his pleasure in hunting, and that without them it would probably have ceased to exist centuries ago. As I have explained elsewhere, the Forest laws, which were of unexampled severity, were mainly directed to this end. Although the deer were thus reserved for the king, there were some exceptions, and fee deer were allowed to certain persons, as the following very interesting fragment of an ancient Royal Roll, preserved in the British Museum, shows. The date is uncertain, but it is at any rate anterior to the dissolution of the Monasteries. The first paragraph is rendered unintelligible by mutilation:—

“*Item.* That the Lieu tenant, Rydyng forester, ye Ranger of the same Forest, certyfy at particularly in a byll, the certentie of the deer kyllyd and servyd by every of them with the . . . to them directyd and gyvyn.

“*It.* The clerke of the Swanymote every yere within xii days next after the fest of Saynt Michell, and within convenyent tyme after to make relacion to the kyng's hyghnes of the certentie of the deer kyllyd in the same forest in the sayd yere and byfore him presentyd as ys aforsayd.

“*It.* Yf any deer be kyllyd by chaunce and recovered so that the fleshe be of any goodnes, then the keper in whose walke any such deer be recovered dilyver and bryng the same to the Lieu tenant, in his absens, to the Rydyng forester and Ranger to th'entent that yf the sayd deer be mete for the Kyng's Hyghnesse then that yt be sent to his hyghnes, and yf convenyent tyme serve not, then that it be distrybutyd by the discretion of the lieu tenant, and in his absens by the sayd Rydyng forester or Ranger, best for the savegarde of the kyng's game.

“*It.* The sayd Lieu tenant Rydyng forester or Ranger to certyfy at the next Swanymote to the Clerke

and withal to what persons the same deer so kyllyd by chaunce and recovered is distrybuted.

“*It.* That noo keper hunt or suffer any person to hunt within his walke for any fee deer but suche as before this tyme hath used to hunt for their disport and plesure for the kyllyng of their fee deer.

“*It.* Every keper yf he lyst to call his neyburns or borderers to assyst hym to hunt, and serve his warrant or commandment to th’entent they may take sport, and therby to increase frendschyppe and amytie.

“*It.* The freeholders to hunt and take disport for the kyllynge of the fee deer by the only syght of the lieu tenant, and in his absens, of the Rydyng forester or Ranger.

“*It.* That noo keper, his servants or deputies use or kepe in ther howses or walke any crossbow except yt be the lieu tenant.

“*It.* That noo keper suffer noo crossbow to be kept or used in his walke as nere as he can, except the person that so hath or use yt may so justyfy the keping therof by the kynges lawes, and yf he find or sees any suche crossebow, lett yt be dylvred to the Clerke of the Swanymote to th’entent that dew punyschement may be . . . accordyng to the kyngs lawes and therupon informacion to be gyvyn in th’ exchequer.

“*It.* Yf any keper suspect any person in his walke to kepe any crosebow in hys howse, then lett hym take with hym a verderer, or constable of the parische where the party so suspect dwellyth, and serche the howse. Yf any be founde, lett yt be dylivered as ys aforsayd.

“*It.* That every noble man may hunt and take his disport and plesure in the same forest [accordyng] at ther peryll accordyng as the kyngs lawes wyll suffer them, and the keper to gyve them the loking over, and to make them suche sport as it apperteynyth to a noble man, and the sayd keper to certyfy the same at the next Swanymote.

“*It.* That the warrants commandements and other fee deer be taken equally when yt may be moste conveniently sparyd by the outsyght and discrecion of the sayd lieu tenant Rydyng forester and Ranger, or one of them, in absens of the resydew.

“*It.* Noo keper or forester, lieu tenant Rydyng forester, Ranger or ther seruants hunt or any wyse by nyght, onles yt be for the recoverie of sum hurt or chased deer.

“*It.* That noo person taken by the keepers or any

other offycers be commytted to warde or letten to bayll onles he be examyned by the lieu tenant, Rydyng for-ester, Ranger, and Steward or two of them.

“*It.* That the obligacions for the bayll remayn with the Steward of record.

“*It.* That every keper observe ther articles upon peyn of the forfeitur of his offyce, and that upon dew examynacion and dew proof hadde byfore the lieu tenant, Rydyng forester, Ranger and Steward of the Swany-mote, the sayd offender to be dischargyd of the exer-syng of his sayd office, tyll the kyngs plesure be further knowyng.

“*It.* Thees fee deer to be alowed as here after folow-yth :—

“ffyrst, the Justices of the Forest.

“*It.* The Lieu tenant.

“*It.* The Steward.

“*It.* The Rydyng Forester.

“*It.* The Ranger.

“*It.* Every Keper.

“*It.* My Lorde of Waltham.

“*It.* My Lady of Barkyng.

“*It.* The ffreholders.”

Red-Deer—the largest and handsomest of the deer tribe in Great Britain—had free range of Epping Forest (along with the fallow) until the early part of the present century. The lord of the manor of Loughton has some heads taken from the Forest, which have been in the possession of his family for several generations, and which adorned what would certainly be accounted grand stags in Scotland at the present time. This was to be expected, as woodland red-deer always attain the largest size. From a state-ment made in 1871 by a very old inhabitant, and written down from his lips, it appears that the herd was of con-siderable size within his recollection. “There was a kennel at Loughton Bridge, kept by a man named Dean, and the dogs and horses for the hunt were kept there. A paddock was enclosed with high palings, and in this enclosure the deer, caught wild from the Forest, were kept, and hunted as required, but not killed. The black-deer (fallow) were hunted two or three times a week, killed, and used as required also. The method of taking the red-deer was by fixing a net (kept at Lough-ton Bridge for the purpose, and about a mile long) from the milestone in the Forest down to Monk Wood. The deer were driven up from Monk Wood into it. Two or three were then selected, and the rest, with the young

ones, set at liberty. A cart for the purpose was in readiness, and the deer caught were placed in it and taken to Loughton Bridge, where they were kept in the paddock till wanted." The following graphic account, taken from *Bailey's Magazine* a few years ago, is from the pen of an old writer well acquainted with the Forest :—"The limits of the grand old Forest have been grievously curtailed since the days when Mr. Long Pole Wellesley played high jinks at Wanstead House, where he kept a pack of staghounds, in a style of princely magnificence, to hunt the wild red-deer. These hounds were not foxhounds entered to deer, but the old-fashioned staghounds, such as King George III. used for the purpose. The servants were dressed in Lincoln Green. There were constant hunt breakfasts at the Eagle, at Snaresbrook (then in the midst of the open waste), where all were bidden at Mr. Long Wellesley's expense. Everything was done with the most reckless extravagance; and he would scatter sovereigns to countrymen in the hunting field as readily as other liberal sportsmen would give shillings or sixpences. The pace was too great to last; and when the establishment at Wanstead was broken up, Tommy Rounding managed to secure a few couples of the hounds, which he kept in a rough sort of a way at the back of his house, the Horse and Groom, at Woodford Wells. It may seem passing strange to the present generation that a publican, living within nine miles of the London stones, should have kept hounds to hunt the wild red-deer; but there are those living who can vouch for the fact. Rounding was a capital sportsman, and so were all the family; his brother Richard, who had died previously, and his brother Robert, who only died last year. We must borrow from Mr. Thomas Hood, who knew him well, a description of the man himself :—

' A snow-white head, a merry eye,
 A cheek of jolly blush;
 A claret tint laid on by health
 With Master Reynard's brush !'

And so the game was kept alive until an order came that the red-deer were to be caught up and taken to Windsor Park. This was carried out as far as practicable; the few that had escaped the toils of the yeomen prickers gradually fell victims to poachers and pot-hunters, until of the whole herd only one old stag remained. This stag was hunted by Tommy Rounding,

and, after a great run, was killed at West Ham; and so ended the chase of the wild red-deer in Epping Forest. For years afterwards, at the festive gatherings at the Horse and Groom, a handsome silver cup used to be handed round, with the inscription—'From Long Wellesley abroad to Tommy Rounding at home!'" The staghounds came to an end in 1797, and early in the century the red-deer were suffered, from the indifference of the authorities, to diminish; and the remainder of the herd were finally caught some twenty years later, and transported to Windsor. I am happy to say that Her Majesty the Queen has recently been graciously pleased to restore some of their descendants to their ancient haunts for the delight of her subjects, and the glades may again echo the autumn challenge of a royal stag.

Roe-Deer. These beautiful little animals—the smallest of the deer tribe of Great Britain—roamed throughout the forest regions of Great Britain in primeval times, and doubtless Epping Forest formed no exception. Until quite recently, although they are very numerous in the dense woods of Scotland, they only existed in a wild state in one district in England—the wooded combes in the neighbourhood of the Vale of Blackmoor, in Dorsetshire, whither they were imported about eighty years ago. I had in February last the satisfaction of reintroducing them to Epping Forest. Long convinced of the suitability of the Forest to their needs, I had at length the good fortune to secure the co-operation of Mr. Mansell Pleydell and Mr. C. Hambro, two Dorsetshire proprietors, in whose woods the roe are common, and who by every means in their power forwarded the experiment which I desired to carry out. Its success was also largely due to Mr. J. E. Harting, who took a naturalist's interest in the venture, and who not only superintended the capture, but accompanied them in their long journey through the night to Loughton. The capture was effected by long nets stretched across the wood, the deer being driven towards them by beaters and secured when entangled in the meshes, and carefully placed in a covered deer-van. In this way eight were taken, but two being destined for the Zoological Gardens, only six, two bucks and four does, were enlarged in their new home. Owing to the careful provisions which were made by Mr. Porter, an experienced deer-catcher, no hitch occurred, and when the door of the van was opened the next morning in the thickest part of the Forest, each one bounded out sound

in limb, and, after one stare of surprise, made off at its best pace into the cover. They have since been frequently seen, and though some have occasionally wandered beyond the limit of the Forest, they are hospitably entertained by the neighbouring proprietors. Some of the does at any rate, on July 4, 1884, had fawns at their sides. The roe are less gregarious than most other kinds of deer, and, unlike the red and fallow-deer, which herd together in considerable numbers, they keep in pairs, or at most in small parties of three or four. They are of a bright reddish-brown in summer, changing to a dull gray in autumn. About a third of the size of the fallow-deer, their horns are not palmated and smooth as are those of that animal, but are branched and pointed like those of the red-deer, only on a smaller scale.

Hares are found throughout the northern part of the Forest in moderate numbers. That well-known master of hounds, Mr. H. Vigne, who has kept harriers in the neighbourhood for fifty-five years, occasionally hunts them. With this exception they enjoy a quiet time of it as long as they remain in this sanctuary.

Rabbits are in no great numbers, but enjoy a wide range, as may be observed whenever snow lies on the ground.

Badger. I understand that one of these animals was killed on the Hill Hall estate twenty years ago, and another more recently. Owing to their nocturnal habits, it is difficult to say whether they are now extinct or not, but I believe that the conditions which now prevail in the Forest are favourable to their existence, and I hope to settle the question by introducing some more before long.

The **Fox**, the largest of our Forest beasts of prey, is welcome here to such pheasants and rabbits as he can catch. He does not often show himself, and the hounds do not trouble him more than once or twice in the season, nor does he yield them many trophies. They are often found sleeping in the daytime in the crown of some oak pollard. Several litters of cubs are annually produced in the deep earths near Monk Wood.

The **Polecat** was not uncommon in this district twenty years ago. As he preys on all other animals which he can catch, whether fur or feather, the gamekeeper preys upon him. He is consequently now rare if not extinct. As there is no game preservation, in the ordinary sense, in Epping Forest, but both the game and their natural enemies are equally welcomed, I hope that the polecat will return and multiply.

The **Marten**, which is closely allied to, but larger than, the last-named animal, is very rare, but is believed still to exist in the Forest. It frequents woods and lies in the hollows of old stems. Extremely agile in its movements, it traverses branches and leaps from bough to bough like the squirrel. "The last killed in Essex was trapped by Mr. Luffman, at that time keeper to Mr. Maitland, in April 1853, in one of the Loughton covers. I observed a living specimen near Ambresbury Banks on 29th July 1883."—J. S. E. The Rev. W. B. Daniel, in *Rural Sports*, published in 1801, says of this animal—"Some years since one used to run tame about the kitchen of the 'Bald Faced Stag' on Epping Forest."



STOAT.

The **Stoat** is the next in size to the polecat of the weasel family, and is of as sanguinary a disposition. Being the near relative of the arctic ermine it frequently turns partially white in winter. A pure white specimen has been killed in the Forest.

The **Weasel**, the smallest of his tribe, has all the ferocity and courage of his bigger brethren, and being even more active in proportion to his size, works havoc among the lesser birds and animals. I constantly see his tiny rope-like body arched like a bridge, as he races across my lawn, intent upon his bloodthirsty work.

Squirrel. Owing to the persecution which this popular favourite has suffered, and the ease with which it is hunted to death when the trees have been recently pol-

larded and there are no tall branches in which to take refuge, it has sadly diminished, and is now rarely seen. As the pollarding has now been stopped, it is to be hoped that it will recover the position which its beauty and pretty manners deserve. As acorns and beech-mast abound, it will not suffer for want of its winter store.

Otter. Two of these animals were killed by the Lea near Chingford in 1881.

Water Rats abound in the Ching, and are frequently found in the Forest ponds.

Dormouse. This pretty little rodent is easily tamed and made a pet of. In winter he lies in a state of profound torpor in the middle of a mass of grass, which appears to have been woven without a seam, and which must be torn open to find the owner, so that it is difficult to discover how he finished the fabric after getting inside. When found in this state he can only be awakened by baking him in front of the fire. He derives his name from this enviable capacity for sleep. I believe this to be the culprit who annually gnaws the heart of the young shoots of some of my chestnut trees, and litters the ground with them.

Long-tailed Field Mouse. A beautiful but mischievous little animal, who is fond of gnawing the bark of young trees and rooting up bulbs. In the Forest he is in clover among acorns and beech-mast.

Short-tailed Field Mouse. A larger mouse than the last named, though he resembles him in habit, and is equally destructive, especially to peas, beans, and crocus roots.

The **Hedgehog** passes most of his time in hiding, lying up in some dry ditch or hole. He never leaves his retreat by day, and, being then generally covered by the leaves and grass which adhere to his spines, he is seldom seen unless a dog discovers him by scent. The late wanderer in the Forest may, however, catch a glimpse of him in the twilight, quartering the ground like a well-trained setter, and seeking his food by the help of his nose. During winter he hibernates in a torpid state.

Water Shrew. "This elegant little animal is aquatic in its habits, frequenting clear fresh water ditches and brooks. It swims and dives with great address. I have seen one swim across a pond in the Forest."—J. L. E.

Common Shrew. Is very gregarious. "I have seen at least a dozen, on a fine summer evening, gamboling together among the dead leaves when all is still. At the least movement they hide themselves in their burrows."—J. L. E.

REPTILES.

The **Common Snake** and the **Viper** are found in the driest parts of the Forest. The former has yellow markings and a scaly appearance, and grows sometimes to three feet in length. The viper is of a dull brown throughout. The **Slow Worm**, which is quite harmless, is not uncommon. It is of a bronzy colour, and about twelve inches long.

It is much to be hoped that these reptiles will not be exterminated. The first and last are perfectly harmless. The viper, though its bite would be inconvenient, and possibly dangerous, will not use its fangs unless attacked.

EPPING FOREST.

ITS BIRDS.

“ The nightingale, of birds most choice,
To do her best shall strain her voice :
And to this bird, to make a set,
The mavis, merle, and robinet,
The lark, the linnet, and the thrush,
That make a choir in every bush.”—DRAYTON.

MANY kinds of birds are observed in Epping Forest. Formerly they suffered much at the hands of bird-catchers, who caught great numbers with clap-nets and other devices. This is happily now prohibited by the conservator's bye-laws, which are well enforced. The following notes are the result of the observations of several naturalists in the neighbourhood.

Peregrine Falcon. A pair of these birds were killed some years ago on the Copped Hall estate.

Sparrow Hawk. Frequently seen throughout the Forest. Is destructive to game and small birds.

Hobby. A pair of these beautiful but rare summer visitants nested for two years—1846-47. After being disturbed, they nested on the Hill Hall estate, and brought off their young.

Kestrel. Common. Seen hovering or gliding over the open ground. Feeds chiefly on mice and such small game.

Common Buzzard. Has been seen several times during the last few years.

Rough-legged Buzzard. A pair of these birds killed some years ago at Epping were presented by the late Mr.

Doubleday, of Epping, to the British Museum, where they are still preserved.

Honey Buzzard. A specimen of this bird was observed in September 1881 by my brother, Sir T. F. Buxton. It rose from a bush of beech close to his feet, and flew with rather a heavy flight to an oak about 20 yards off, where it remained for a few seconds. On examining the bush he found it swarming with wasps, which began to fly out on his touching the bushes. He then found pieces of wasps' comb lying on the ground outside



SPARROW HAWK.

the bush, and the dead leaves scattered around. On the following morning, on approaching the spot, he again saw the bird flying over the trees away from him. Much more of the wasps' comb was lying about, and a large cavity could be seen under the branches, where the nest had evidently been scratched up, and the contents strewn around. The branches of the bush showed no signs of injury, as they would have done had any man disturbed the nest. The spot was near the spring on the Woodredon Hill. The bird was subsequently seen on several successive days.

Raven. "A pair of ravens used to nest in the Wanstead heronry. Your grandfather, Samuel Gurney, took me there one spring (I think about 1833 or 1834), and we then saw two young ravens which the keeper had taken out of the nest a few hours previously. Your grandfather bought them, and turned them loose in the stable-yard at Ham House, but as he would not have their wings cut, in a few weeks' time they flew away."—J. H. G.

Barn Owl. I used to hear this bird nightly twenty years ago in Lord's Bushes, the old hollow trees of which it frequented. I am sorry to say it has disappeared from that locality, but I saw a pair close to Fairmead Lodge in the summer of 1884. A chorus of angry jays attracted me to the tree where they were. Farther on in the Forest his silent flight, caused by a fringe of down on the wing, may more frequently be observed. Mr. Lister writes:—"Was a frequent visitor to my garden years ago, and used to beat over the Virginian Creeper that covered the end of the house, where sparrows roosted in great numbers. It bred in an old poplar in the grounds of Forest House, and still breeds yearly in the trees at Elmhurst, Woodford."

Tawny Owl. Not uncommon; may be heard in the evening at almost any season. Monk Wood.

Long-eared Owl. Has been obtained several times, and it would multiply rapidly if it were not so frequently destroyed by gamekeepers.

Short-eared Owl. An autumn and winter visitor. Shot on several occasions by sportsmen in turnip fields in the neighbourhood.

Red-backed Shrike. One of the handsomest of our spring visitors. The broods keep together well into the summer, and are often seen. They breed in the neighbourhood frequently, if not every year. "I have watched a male bird fix the head of a young wren on to a thorn in his 'larder,' using great exertion. Their store usually consists of insects and worms."—A. L.

Great Gray Shrike. The late Mr. Doubleday, of Epping, had a bird of this species which was captured by a bird-catcher in the Forest, and which he kept alive in a cage for a long time. It invariably hung up its food in its cage. If half a dozen small birds were put in (dead), it hung them all up by forcing their heads through the wires of the cage; and pieces of meat were also hung up.

Rook. The Forest is enlivened by several rookeries by Leyton Flats, Woodford Green, Copped Hall, etc.

Jackdaw. They come in great numbers to roost in the

rookery and heronry on the island in Wanstead Park, where they also breed.

Carrion Crow. A few are always about; but they are becoming rare in most parts of England. They nest in several places in the neighbourhood. Their nests may always be distinguished from those of rooks by the lining of wool.

Hooded Crow. Occasional winter visitor.

Magpie. This predatory foe to other birds is happily not common hereabouts. There are several about Loughton, and they breed regularly in the Rectory garden. A pair



JAY.

used always to breed at Knighton, but I have not observed them for two or three years.

Jay. The character of the thicket has greatly encouraged this bird. The harsh rasping note with which he greets an intruder, and his sly ways as he flits ahead, always impelled by curiosity but always out of reach, enliven the Forest, and yet this is the only bird upon whose unlimited increase in the Forest I would place a check. He is cruelly destructive of all other birds' nests, except those which build in holes. A solemn order has gone forth from the Guildhall for his destruction, but who

can measure the craft of this wily bird? So far as I am aware, not a single specimen has been entrapped.

Starling. Perhaps the most abundant bird in the district after the sparrow, but he was a very rare bird in many parts of England fifty years ago. In hard weather about thirty come every morning to be fed on my lawn.

Ring Ousel. A fine cock-bird seen on Mr. Venables' wall and in his garden at the entrance to Wanstead Park on 5th September 1877. "Many years ago I saw one in my father's fields at Upton at the time of the spring migration."—A. L. One was seen in the spring of 1884 by the River Roding, and other instances have been recorded.



GREEN WOODPECKER.

Song Thrush. Abundant in the autumn, but almost absent in mid-winter.

Blackbird. Abundant. We owe much of the music of the woods to these two birds.

Redwing. Large numbers roost in the denser thickets during hard winters, especially when there is a good supply of holly and other berries. At sunset they come trooping in from all quarters, and sweep round the trees in graceful flight before settling down for the night in the lower brushwood.

Fieldfare. In hard weather they come close to the houses to feed on holly berries.

Missel Thrush. Common. Sings in Wanstead Park in mid-winter and the early months.

Wryneck. Comes with the cuckoo, and is frequently heard in April, but soon leaves us for the more retired parts of the Forest.

Green Woodpecker. May be constantly heard tapping, and occasionally seen, in the northern part of the Forest. Very frequent about Cook's Folly, near Walthamstow.



KINGFISHER.

Greater Spotted Woodpecker. Occurs in Loughton Manor.

Lesser Spotted Woodpecker. "Three times seen in my garden at Leytonstone."—A. L. Not very uncommon in the Forest.

Nuthatch. Frequent in the neighbourhood of Buckhurst Hill. A neighbour of mine supplies them with nuts, which they carry off every morning, invariably leaving unsound ones. "Many years ago a pair used to come

to my whistle every morning to be fed at an old mulberry-tree in my garden. They would run down the branch to within a yard of my outstretched hand, but never quite ventured to take the nuts I offered them until I laid them down."—A. L.

Hoopoe. More than one example of this rare bird has been observed in the neighbourhood. One bird frequented a garden at Knotts Green for several days about four years ago.

Tree Creeper. Resident and common in the Forest, and in Wanstead Park.

Cuckoo. A common summer visitor.

Kingfisher. Not unfrequently seen by the ponds and streams of the Forest. The last I saw was a few weeks ago, when one flashed out like a streak of blue lightning from a ditch close to the Forest Hotel at Chingford.

Crossbills. The late Mr. Doubleday, of Epping, procured examples of both the common and European white-winged crossbills at Epping, and in September 1861 three specimens of the parrot crossbill were killed at one shot by a boy at Lambourne (see *The Zoologist*, 1861, p. 7759). A pair of the common crossbill nested in some firs at the Bower, close by Epping Railway station.

House Sparrow. Everywhere.

Tree Sparrow. Common about the pollard willows near the River Roding.

Brambling. More frequent in the winter than is usually supposed. A few years since there were large flocks feeding upon the beech-nuts.

Greenfinch. Common.

Hawfinch. Common in the Forest, but very shy, and consequently rarely seen. The nests are so loosely built that the eggs may often be seen from below through the bottom. Mr. E. Barclay informs me that in 1878 a pair nested in Cook's Folly and brought off five young ones. Occasionally seen in my garden in winter feeding on hawthorn berries. In June, about twenty years ago, I shot a young bird which was feeding on my peas in company with one or two more. An interesting note on the food and habits of the hawfinch, as observed at Epping by the late Mr. Doubleday, will be found in *The Zoologist* for 1843, p. 40, and 1856, p. 5098. He remarked that this bird is particularly fond of the seeds of the hornbeam, and is always more common in the Forest when a fine warm spring has favoured the flowering of the hornbeam and produced a plentiful crop of seeds.

Bullfinch. Frequent throughout this neighbourhood. It is one of the few birds which it is pardonable to shoot in our gardens.

Chaffinch. Very common, and nearly as mischievous as the preceding.

Common Bunting. "Used to be more frequent than now. I have often had nests with eggs brought to me by the mowers."—J. L. E.

Snow Bunting. One example of this bird was killed by a boy with a stone on Epping Plain. Another was killed in 1840 by an old sportsman who is still alive.

Yellow Hammer. Common.



HAWFINCH.

Black-headed Bunting. Common in summer in bushes along the Roding. Occasionally seen in winter.

Goldfinch. Used often to be caught by bird-catchers on Wanstead Flats. Common about the lanes of Loughton.

Siskin. Occasional winter visitor to Wanstead Park. I saw one about the alders last spring, 1883; three were seen in February 1884.

Linnet. Large numbers were taken by bird-catchers on Wanstead Flats a few years ago. I have talked with these men when at work with their clapnets, and they told me they often caught lesser redpolls; these and the linnets they put in cages; but greenfinches, which they took in prodigious numbers, were killed at once,

and tied by the neck in bunches of a score each, and sold to the London markets. The numbers were far greater than could have been produced in the district, but in spring and autumn, when the bird-catchers ply their trade, there is a general shifting of quarters by these birds, so that many caught in the Forest must have come from a distance.

Lesser Redpoll. Loughton Forest and Wanstead Flats.

Mealy Redpoll. This pretty species only appears at long intervals, and, like the crossbills, in considerable numbers, probably in quest of food. "Some years ago many examples were trapped by myself and H. Doubleday."—J. L. E.

Skylark. Common, and generally distributed.

Meadow Pipit. Only a winter visitant here. Its quickly repeated note, as it rises with jerking flight, cheers the sadness of our flats in winter.

Tree Pipit. Frequent about the borders of the woods. As soon as it arrives in April its song is constantly heard as it soars to a considerable height and descends with motionless and outstretched wings.

Common Wren. Everywhere.

Robin. Everywhere.

Pied Wagtail. A common resident. The greater number go south, to return about the end of February dressed in their summer plumage. Those that remain with us retain their winter garb until the spring is farther advanced.

Yellow Wagtail. Used to be frequent in summer, but now scarce in this neighbourhood.

Gray Wagtail. Not uncommon along the Roding in winter.

Bee-eater. Observed at Wanstead by H. I.

Spotted Flycatcher. A common summer visitor; but the last of all to arrive.

Pied Flycatcher. A female bird of this species was taken in the Forest by a bird-catcher on the 13th September 1877, and was forwarded to Mr. Harting for identification. It was kept alive for some days on chopped egg and meal worms. Two examples were shot in the Theydon Grove, and are in the Doubleday collection.

Nightingale. Well distributed over our district. The cock bird arrives first and sings best while he is waiting for his mate to join him. When the nesting is far advanced, his song is reduced to a tuneless croak. If a trap is baited with meal worms they do not seem able to resist the temptation, and they are consequently easily

caught. In the spring of 1858 an old Leytonstone bird-catcher caught thirty-four about the avenues. I lately found one of these gentry, who mostly hail from Whitechapel, outside my fence at Knighton. He was at the time engaged in catching cock chaffinches with bird-lime, using a tame hen chaffinch as a decoy—an old device. In reply to the hope which I expressed that he did not catch nightingales, he replied, “No, sir, we seldom catches ’em, and when we does, *we lets ’em go.*” From the preternatural innocence with which this was said, it was perhaps true. The nests are placed on the ground in dense herbage, and are fortunately difficult to find.

Redstart. Frequent in summer, and a great ornament to our Forest.

Hedge Sparrow. Very common.

Alpine Accentor. Many years ago a specimen of this rare little bird was shot in a garden on the borders of the Forest by Mr. James Pamplin of Whip’s Cross Nursery, Walthamstow. It was taken to London and identified by the late Mr. Gould, and will be found recorded in the *Magazine of Natural History* for 1832, p. 288.

Garden Warbler. Its pleasing song not unfrequently heard in April and May in forest copses and Wanstead Park; it used to be common about the avenues.

Sedge Warbler. Common in the spring by the Roding, at Red Bridge, and in Wanstead Park.

Grasshopper Warbler. Common throughout the district.

Blackcap. Arrives early in April, and is common in the forest and gardens, but especially in Wanstead Park, where the wood echoes in early summer with its fine song.

White-throat. In every hedge in spring and summer.

Lesser White-throat. A regular summer visitor to our gardens; a restless noisy little bird.

Chiff Chaff. Our earliest spring visitor.

Willow Wren. Very common everywhere when April comes. The approximate dates of arrival of the three species of Willow Wren in the Forest are—Chiff Chaff, 31st March; Willow Wren, 3d April; Wood Wren, 15th April.

Wood Wren. Local rather than rare, generally frequenting tall trees, and the latest of the three willow wrens to appear, arriving usually in the third week of April. All three species breed in the Forest. The nest of the wood wren may always be known from those of the others by never having any feathers in the lining.

- Golden - Crested Wren.** Common throughout the year, especially in the Wanstead Park woods.
- Firecrested Wren.** A bird of this species, taken by a bird-catcher at Epping, 26th November 1878, is preserved in the collection of British birds in the British Museum.
- Wheatear.** A passing visitor in spring and autumn.
- Whinchat.** A summer visitor, breeding in the furze bushes in the open forest.
- Stonechat.** Much more abundant than the last ; breeds on the open forest ; a few remain throughout the year.
- Great Titmouse (oxeye).** Common all the year. A noisy pugnacious little bird, who resents, with angry chatter,



GREAT TIT.

intrusion into its thickets. They freely build in boxes placed for the purpose against the trees in my garden. I have more than once known the hen bird, when covering the young ones, to fly at my hand when I have opened the lid. They appear to be very fond of the seeds of the yew. "Oxeyes have built regularly for five-and-twenty years in the hollow of an old cherry-tree on my lawn, 3 feet from the ground. One season the usual time had passed without their beginning operations, and I found some stones had been dropped into the hole ; these I removed, and the following day the nest was begun and the brood was brought off in due course."—
A. L.

Blue Titmouse. Common all the year.

Cole Titmouse. Not uncommon in gardens, as well as in some parts of the Forest.

Marsh Titmouse. Common in Wanstead Park and in low-lying parts of the Forest. Its name is misleading, as it is not a marsh bird in any sense.

Longtailed Titmouse. Resident and not uncommon. Families of ten or more keep together throughout the winter and flit from tree to tree, scouring them for insects. They never come to the lump of fat which is put outside my house for the other titmice.

Sand-Martin. Numbers breed in holes in the railway cut-



LONGTAILED TITS.

ting between Leytonstone and Wanstead. They are the earliest of the swallows to appear, often arriving in March.

House-Martin. Not so common as they ought to be. The vast number of sparrows in the neighbourhood is hostile to their increase. A friend and neighbour increased the number of house-martins' nests on his house from two to ninety, simply by waging unsparing war on the sparrows.

Chimney Swallow. In the late summer these birds gather in thousands to roost in the reed-bed in the pond in Cook's Folly. This seems to be the general rendezvous for the district, and at sunset they may be seen flying in small companies from every direction towards this point. The confused noise as they swarm like bees to gain a foothold among the reeds is most remarkable. In August 1855 a pure white swallow was observed at Epping.

Swift. Common from May to August.

Goatsucker or Nightjar. Frequently seen during summer in the Forest, where they breed on the ground, laying two oval eggs of a marbled gray colour.

Woodpigeon. Great numbers breed in the Forest, and their exquisite note may be constantly heard.

Stockdove. Always come in May and nest. It nests in holes in trees.

Turtledove. A constant summer visitor. I have seen flocks of them about Walthamstow in late summer. Its plain-



WOODPIGEONS.

tive note may be frequently heard in Theydon Thickets at the time of incubation.

Pheasant. There are a fair number of wild-bred pheasants in the Forest, and many reared in neighbouring woods come in for acorns in the autumn.

Partridge. A good many pairs, both of the gray and red-legged kinds, breed on the more open parts of the Forest.

Thick-knee Stone Curlew or Norfolk Plover. I saw this bird on the 21st April 1883 on one of the open "plains" in the Fairmead Thicket; when it rose it flew a few yards only and realighted. I should not have known what it

was if I had not been in the company of a well-known naturalist. A young bird of this species was captured on the borders of the Lower Forest.

Golden Plover. Not uncommon in winter. A flock of more than a hundred frequented Wanstead Park and the fields adjoining in company with lapwings and fieldfares in March 1883. Flocks also frequent Thornwood Common. Many of the male birds showed much black about the neck and breast.

Gray Plover. Has been found by the Roding in late autumn. It is generally considered a strictly maritime bird, and therefore its occurrence in the Forest is remarkable. One procured by the late Mr. Doubleday of Epping is preserved in the British Museum.



LAPWINGS.

Lapwing. Frequently seen in flocks about the fields near Wanstead Park and elsewhere. Ten years ago (1874) they used to breed on Fairmead and near the Wake Arms. I have only observed one pair this year, but there are some fields just outside the limits of the Forest to which they still resort in spring.

Landrail or Corncrake. A summer visitor, nesting and remaining till the middle of September.

Water-rail. Not so rare as is sometimes supposed. Owing to their silence and habit of creeping along the sides of brooks, and rarely taking to the water, they are not often seen; but they are sometimes very noisy in the breeding season.

Heron. These birds come to the heronry in Wanstead Park

at the end of January or beginning of February, and at once begin nesting operations. The old nests seem to require little repair. About fifty birds came to the trees in 1883; by the 6th of March 1884 forty-three were counted, and there were probably more. At that date the keeper considered that fresh arrivals were still coming. If this were so, it is remarkable, to say the least, as in most of the nests the birds had been sitting since the beginning of the month. This is earlier than usual, probably on account of the mild season.



HERONS.

The greater number of these birds leave the heronry towards the middle of summer, but a few remain throughout the year.

The admission of the public to the grounds does not appear at all to have interfered with the herons breeding.

Woodcock. These birds are not unfrequent visitors to the Forest in the winter months, but the absence of springs and the hardness of the soil are unfavourable to them, and they are never numerous where cattle have access. They do not, therefore, generally remain long, but instances

have been known of their staying through the summer and breeding.

Snipe. Often common by the Roding in winter, and not unfrequent by Forest ponds.

Jacksnipe. "I put up one by the Roding near Red Bridge, and, hiding myself, watched him return to the same spot after a long flight, a well-known peculiarity of the bird."—A. L. I saw one on Piercing Hill this year—1885.



WATERHEN.

Bittern. A specimen was killed a few years ago by the stream adjoining Wanstead Park.

Kittiwake Gull. An occasional visitor in stormy weather.

Common Sandpiper. Occasionally seen in spring and autumn by Leytonstone Pond, the waters in Wanstead Park, and by the Roding. I saw one last year by Baldwin's Hill Pond.

Green Sandpiper. Occasional visitor in spring and autumn. One was shot in Mr. Barclay's grounds, Knotts Green. Two others shot near Epping are preserved in the British Museum.

- Curlew.** Seen several times and killed at Copped Hall.
- Curlew Sandpiper.** A specimen procured by the late Mr. Doubleday of Epping was presented by him to the British Museum.
- Little Stint.** Has once at least been procured near Epping. The specimen referred to is in the British Museum.
- Gray Phalarope.** "I set up a fine example of this beautiful bird, shot by the Rev. L. Cockerell at a brook, North Weald."—J. L. E. Another specimen was killed some years since at Wanstead Park.
- Coot.** Breeds in Wanstead Park, where they are numerous, and have become remarkably tame since the public have been admitted.
- Moorhen.** Most abundant in Wanstead Park and most of the Forest ponds.
- Spotted Crake.** Occasionally met with in the soft low-lying parts of the Forest, such as would be attractive to snipe. One may be seen preserved at the house of the head keeper, Broad Strood Lodge.
- Great-crested Grebe.** "I observed a female bird on the Wanstead basin for several days in the spring of 1883."—A. L.
- Red-necked Grebe.** "In February 1877 one of these birds remained for almost a week on the basin in Wanstead Park. I watched it repeatedly with a good telescope. It was in fine plumage."—A. L.
- Little Grebe or Dabchick.** A great traveller notwithstanding his short wings. Frequently seen in the spring in the lower and open ponds in Wanstead Park, but is said not to remain to breed. I observed a pair on my own pond for the first time in the spring of 1884, and I believe them to have had a nest.
- Red-throated Diver.** "In January 1877 I watched one of these rare visitors on the Wanstead basin. My telescope showed the speckling on the back quite distinctly; it was therefore probably a young bird."—A. L.
- Wild Duck.** Breeds annually in several parts of the Forest. A small party of them frequented Connaught Water throughout the winters of 1883-84, and, being left alone, became very tame.
- Widgeon.** May be seen occasionally in winter.
- Teal.** Several frequented the Wanstead Park waters in the spring of 1883, and in the following spring I saw a single bird on Connaught Water. We hope that it will take to breeding there.
- Scaup.** A flock of seven or eight remained on the Wanstead

basin for several days a few winters ago. They were very shy.

Tufted Duck. Early in 1884 a male and three females frequented the upper pond in Wanstead Park for two months in company with the coots, and became almost as tame as they are. The male bird left us towards the end of February, but the females were still there March 7. They are excellent divers.

Pochard. Has been observed at Wanstead. A single bird



WILD DUCK.

visited my pond last spring, and remained some weeks, consorting with the tame call ducks, and becoming himself very tame. A single bird came to the Wanstead ponds early last year and remained more than a month. At first he was very wild, but towards the end of his stay became much tamer. Last year probably the same bird returned and kept company with the tufted ducks, acquiring their tameness. He went away with the male tufted duck towards the end of February.

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- Goosander.** A flock of fifteen in immature plumage remained on the Basin at Wanstead for five days during the past winter—1885. “It was an interesting sight to watch the graceful fishing operations of these birds with a good telescope. After swimming in a compact company for a considerable time, they would all suddenly commence diving, probably having come over a shoal of fish, for many would be seen emerging with a fish in their bills, and, if one was too large to be immediately swallowed, a scramble would take place, and it would change beaks several times before being finally disposed of.”—A. L.
- Wild Geese.** Flocks seen flying overhead during the winter months, especially brent, and gray of some species.

EPHING FOREST.

ITS MOTHS AND BUTTERFLIES.

“So likewise are the forests compounded things; for it is the variety of creatures in it that makes this terrestrial globe wherein we live so beautiful and full of delight.”—ANONYMOUS WRITER, 1634.

A LARGE number of collectors visit the Forest armed with butterfly-nets. I need therefore offer no excuse for adding the following list, which does not profess to be exhaustive, prepared by a local entomologist of long experience, of some of his more important “catches” of rare or local species which are indigenous to the Forest, together with the positions in which they are most likely to occur.

- Vanessa antiopa** (*The Camberwell Beauty*). One specimen.
Epping Lower Forest.
- Thecla betulæ** (*The Brown Hairstreak*). Larvæ on blackthorn. Fairmead.
- Lycæna ægon** (*The Silver-studded Blue*). On rushes at the back of the King's Oak.
- Macroglossa fuciformis** (*The Broad-bordered Bee Hawk-Moth*). On the flowers of ragged robin at the back of King's Oak.
- Macroglossa bombylifomis** (*The Narrow-bordered Bee Hawk-Moth*). On the flowers of ragged robin at the back of King's Oak.
- Limacodes asellus** (*The Triangle*). Between Loughton and Wake Arms.

- Lithosia complana** (*The Scarce Footman*). On pollard oaks.
- Lithosia quadra** (*The Four Spotted Footman*). Opposite the Wake Arms.
- Eucheliæ jacobææ** (*The Cinnabar*). Used to be common on ragwort by the side of Epping Road; now scarce.
- Euthemonia russula** (*The Clouded Buff*). Bogs and damp heathy places by Theydon Road.
- Arctia fuliginosa** (*The Ruby Tiger*). Larvæ on herbaceous plants. Late autumn.
- Demas coryli** (*The Nut-Tree Tussock*). Larvæ on beech. Occurs throughout the Forest; nowhere common.
- Pœcilocampa populi** (*The December Moth*). Larvæ on trunks of oak. Scarce.
- Lasiocampa quercifolia** (*The Lappet Moth*). Larvæ on sallows, old gravel-pits by the Wake Arms.
- Selenia lunaria** (*The Lunar Thorn*). Beaten out from hornbeam.
- Selenia illustraria** (*The Purple Thorn*). Beaten out from whitethorn.
- Ennornos erosaria** (*The September Thorn*). Larvæ found on oak trees.
- Boarmia roboraria** (*The Great Oak Beauty*). Oak trunks. Epping Upper Forest.
- Tephrosia consonaria** (*The Square Spot*). Old beech trunks. Monk Wood.
- Tephrosia extersaria** (*The Brindled White Spot*). Oak trunks.
- Ephyra porata** (*The False Mocha*). Damp places at the back of the King's Oak.
- Cabera rotundaria**. Epping Lower Forest.
- Aleucis pictaria**. Old blackthorns. Fairmead.
- Numeria pulveraria** (*The Barred Umber*). Amongst beeches.
- Lobophora viretata**. Old beeches. Monk Wood. Very rare.
- Cidaria silaceata**. Damp places, where *Epilobium parviflorum* grows.
- Anaitis plagiata**. Theydon Thickets.
- Platypteryx hamula**. On oaks. Fairmead.
- Stauropus fagi** (*The Lobster Moth*). Beech trunks. Monk Wood.
- Notodonta camelina** (*The Coxcomb Prominent*). Beech trunks. Monk Wood.
- Notodonta ziczac** (*The Pebble Prominent*). Larvæ on dwarf sallow.
- Notodonta trepida** (*The Large Prominent*). Oak trunks.
- Notodonta chaonia**. Pollard oaks. Borders of Monk Wood.

- Cymatophora ridens*. Oak trunks. Epping Upper Forest.
- Acronycta tridens*. Scrubby whitethorns. Epping Upper Forest.
- Acronycta rumicis*. At sugared trees. Epping Lower Forest.
- Gortyna flavago*. Larvæ inside stems of thistle. Fairmead.
- Neuria saponariæ*. Borders of Epping Lower Forest.
- Charæas graminis* (*The Antler Moth*). Males fly in the morning between seven and eight o'clock at the back of the King's Oak.
- Cerigo cytherea*. At sugared trees. Epping Lower Forest.
- Luperina cæspitis*. Upon bents of grass at night. Rare.
- Agrotis puta*. At sugared trees.
- Agrotis saucia*. At sugared trees. Rare.
- Agrotis aquilina*. On rush blossoms. Epping Lower Forest.
- Agrotis ravidæ*. At sugared trees. Rare.
- Triphæna fimbria* (*The Broad-bordered Yellow Underwing*). Larvæ on sallows at night.
- Noctua glareosa*. At rush blossoms, and sugar.
- Noctua rhomboidea*. At bramble blossoms, and sugar. Epping Lower Forest.
- Tæniocampa miniosa*. At willow blossoms. Rare.
- Tæniocampa munda*. At willow blossoms.
- Tethea retusa*. Larvæ on sallows.
- Eremobia ochroleuca*. Two specimens sitting at rest on ferns. Epping Upper Forest.
- Agriopsis aprilina*. Larvæ on oak trunks. Imago at sugar.
- Aplecta herbida*. Epping Lower Forest.
- Aplecta tinctoria*. Two specimens on oak trunks.
- Aplecta advena*. At sugar. Epping Lower Forest.
- Hadena suasa*. Epping Lower Forest.
- Hadena thalassina*. On trunks, and at sugared trees.
- Heliothis armigera*. At sugar. Epping Lower Forest. Very rare.
- Erastria venustula*. Scrubby beeches.

EPPING FOREST.

ITS TREES.

“A shadie grove not farr away they spide . . .
Whose loftie trees, yclad with sommer's pride,
Did spred so broad that heaven's light did hide,
Not perceable with power of any starr ;
And all within were paths and allies wide ;
With footing worne, and leading inward farr.”

The Faerie Queene.

EPPING FOREST has no timber to show equal in dimensions or antiquity to the rugged and venerable giants in many of the forests of England. The oaks of Sherwood and the New Forest, and the beeches of Burnham, far surpass those of Epping. Probably few of the latter date back more than 400 or 500 years. This deficiency is owing to the timber right, which was originally entirely under the control of the officers of the Crown who were charged with the preservation of “His Majesty's vert,” having been subsequently vested in many hands, and to the abstraction for the benefit of these persons of most of the valuable trees. The lord warden of the Forest for instance and many others had perquisites in this way, and many orders are found in the Court Rolls, such as the following, for trees to be given



High Beach.

HIGH BEACH

to ecclesiastics and others for the repair of their buildings and for public purposes. An order dated 1722, for felling trees for repairs at Greenwoods Park, provided that "Noe tree fit for ye service of

his Majesty's navy be felled under cover hereof." But it was due, even to a greater degree, to the destructive custom of *pollarding*, or cutting back the stem and branches every fifteen years, at ten feet from the ground, for purposes of fuel. The few woods of larger growth, such as Monk Wood and High Beach, which we possess in the Forest area, are exceptions to the rule; and it will be observed that even these have been pollarded at some former time, as will be seen from the branches all breaking from the stem at the same height from the ground, although they were subsequently allowed unlimited freedom. We probably owe these groves to the foresight of the monks of Waltham, or possibly to their sporting instincts. At least, it is recorded that "they were permitted to assart their lands in Woodford and many other places; and enclose them with a ditch and low hedge, that they might take of their woods at their pleasure, to hunt the fox, hare, and cat in the forest; that their dogs should not be expeditated, etc." The mop-head growth substituted by the process of lopping, for the natural shape, is not only destructive of all variety and grandeur in the timber, but owing to the lodgment of moisture in the crown, and the consequent rotting of the heart of the timber, is fatal to the health and long life of the tree, and weakens its resistance to gales. All kinds of trees were subject to this periodical mutilation except the crab-apple trees, which abound in some sections, and which were specially excepted on account of the deer, who greedily devour the bright-coloured, but to our taste bitter fruit, when it falls in the autumn. While, however, we cannot but regret the effects of this

merciless treatment in the past, we can afford to look back leniently on this ancient right, unique in its way, on account of the important part which it bore in the preservation of the Forest (see p. 20). It is now abolished for ever, and those who exercised it were compensated under the orders of the arbitrator. Henceforth it is one of the most important duties of those who have the control of the Forest, to see that the restoring power of nature has fair play as soon as possible.

In most of the Forest groves a fair number of "spear" or straight-grown trees, especially oaks, have been suffered to grow unutilated, and though the finest have been removed by those who had the right to do so in bygone times, there are many left, of varying ages, up to 150 or 200 years, which, with proper attention, will make fine timber trees for those who come after us. A new danger, however, now threatens the woods, and one which can only be averted by timely care and foresight. Throughout nearly the whole of the wooded portion of the Forest the pollards stand far too closely for healthy development. In some parts the stems are ranked so thickly that 3000 have been counted to a single acre. When the branches were cut back to the stem every few years, this was of little consequence. They had not time to spread and spoil one another before they were again ruthlessly "lopped." The operation of lopping, though very disfiguring for the time, had, at least, the effect of letting in light and air, and encouraging a splendid undergrowth of hollies, thorns, bramble, and bracken, as well as seedling trees. To leave the whole to grow would be a fatal mistake, which would result in a weak

“spindly” growth of branches, competing for the light, and struggling upwards towards it, and the destruction of all undergrowth as well as of the lateral branches of the timber trees. This has, unfortunately, already taken place in some parts where the pollards have been untouched for



HONEYLANE HILL.

twenty or twenty-five years. What few branches there are are long and bare, and the grace of spreading foliage is wanting, while below, the ground is bare. It is to be feared that it will be some years before the thinning, which is now proceeding, will overtake the mischief. I make

these remarks lest some, seeing the axes at work, should assume that the conservators are rashly interfering with the natural growth. The pollards, while in their present state they are almost valueless either from a picturesque or a financial point of view, are artificial, and must be partly removed to assist nature. Some of them have assumed strangely weird and contorted shapes, the result of the torturing they have undergone. These, together with the soundest boles, ought certainly to be preserved, and allowed to develop their lateral branches. The lowest branches of the beech and hornbeam are cropped close by the deer and commoners' cattle. This causes a dense hedge-like growth late in the summer, which holds its withered leaves throughout the winter months, until they are pushed off by the young growth, and shows rich masses of brown in the dull season.

Much devastation has unfortunately been caused, especially in the neighbourhood of the Wake Arms and Theydon, by fires accidentally, or I fear in some cases mischievously, kindled, many acres of charred stems and blackened ground showing a melancholy record. I would invite the co-operation of all visitors in averting this serious evil, and remind them that the careless dropping of a cigar-light, when the herbage is dry, may irreparably destroy many acres of copse, and that wrongdoers may be deterred by a word of caution or by information given to the keepers.

Considerable areas of Forest land, which were wrongfully enclosed, were cleared of trees and cultivated for several years before they were again thrown open. In such places some replanting is

necessary. A beginning has been made, and will be largely extended in future years.

Some have urged that extensive drainage of the Forest should be undertaken. On the other hand, naturalists have complained that this would destroy the swamps, which are their favourite hunting ground. They need be under little apprehension, for, as regards the wooded portion, drainage is very difficult if not impossible. Open drains through clay soil get quickly trodden in by cattle, while covered drains are sought out and presently blocked by the roots of trees.

Of the thousands of Londoners who refresh themselves by a visit to our groves, comparatively few do so at the two periods of the year when they are most beautiful—early May and late October. To the tree-lover I strongly recommend the former month. It is then, when the first burst of spring takes place, that the distinguishing characteristics, and especially the *colours* of each tree, can be best seen. A few weeks later the yellow of the young oak foliage, the gray green of the birches and the burnished light-reflecting quality of the beeches, are merged in one uniform dark green, lovely in its varied shapes and play of light and deep shadow, but monotonous as to colour. The blackthorn in April, the hawthorn in May, a month later the crab, and sheets of the water-violet and water-ranunculus, supply the masses of white without which no group either of flowers or trees is complete. Again in the “fall,” when our glades are almost solitudes, who can measure the glories of the beech groves when they put on their first autumn touches of brown and gold, contrasting with the dark green of the more persistent oak,

and with the saffron yellow of the birch and maple? No leaf-colouring can be found to surpass this in brilliancy, unless it be in the gean tree or wild cherry of Scotland, which I am endeavouring to establish in some parts of the Forest. And yet these beauties are mostly wasted on the desert air. Let me then invite the cockney to extend his migratory periods at both ends. In the following list I have described only those trees which are native to the soil. There are many others, such as the horse chestnut, Spanish chestnut, poplar, elm, walnut, sycamore, Scotch fir, willows of various sorts, etc., of which a few individual specimens may be found in the Forest; but as they are not indigenous, but have either been planted or have seeded themselves from cultivated ground, I take no particular notice of them here. I have also omitted the hazel, as, although we learn that Gilbert de Ecclesia of Chingford "was obliged, by the tenure of his lands, to find a man to gather *nuts* for the lord of the manor," he would find it impossible to fulfil his bargain at the present day.

The **Oak** (*Quercus Robur*).—There are two varieties of the common oak in England—*sessiliflora* and *pedunculata*. It is the former which abounds in the Forest. It is distinguished from the latter by the acorns being borne close to the stalk instead of on footstalks, and by smaller foliage. The largest trunk on the Forest ground stands just within the enclosure by Fairmead Lodge. It has been pollarded up to comparatively recent times, so that the spread of branches is not great, but it has a grand rugged stem 22 ft. 7 in. in circumference at 3 feet from the ground. On the rising ground beyond Connaught Water there is a fine tree of wide spread sometimes known as Sotheby's but more generally as Grimston's Oak, so named after the Hon. Robert Grimston, who first called attention to it, and at whose suggestion a space was cleared around it. There are many picturesque oak pollards of great age in Lord's Bushes, but not only

have they been lopped until quite recently, but they have been overshadowed by younger and more vigorous trees, and their decay thereby much hastened. The oaks have been much injured in some recent seasons by a plague of the small green caterpillar (*Toxtria viridana*), which devours the young leaf in May and June. In 1881 and 1882 in particular, every vestige of foliage was eaten from many of the oaks, and the caterpillars hung in festoons from the bare branches, which were surrounded later in the year by dense clouds of the small moths. Although a second foliage was put forth many trees succumbed to this serious check. It was probably indirectly caused by the severe winters of 1879 and 1880, which, by destroying immense numbers of birds, promoted an unnatural increase in the insects upon which they prey. The jays, by destroying great quantities of eggs, befriend the caterpillars, and are partly responsible for the mischief. The birds have, however, now recovered their majority. The caterpillars are in opposition, and the foliage during the past two seasons has been all that could be desired.

The **Beech** (*Fagus sylvatica*) is certainly entitled to the second place, if not the first, among the Forest trees for its beauty and hardiness. It is easily distinguished by its smooth massive stem and light-green satiny leaves. From its habit of rooting close to the surface, and from its dense foliage, as a rule, nothing will grow under its branches; but the bare surface is very beautiful when it is carpeted in spring with the brown sheaths which have protected the buds during winter, and again by the falling leaves in autumn. Less patient of moisture than the oak, few good specimens are found in such stiff soils as Fairmead thicket; but on the drier hills it is crowding its rival out, and makes fine timber. It is as noble a tree as the oak, but not so long lived. The "mast" or nuts are shed in great profusion, and are a favourite food of the deer. The best beeches in the Forest are found along the green ride in Epping Thicks. Unlike the groves of High Beach and Monk Wood, these have never been pollarded; and, as they stand somewhat thinly, they have not been punished by competing trees, but have made fine lateral growth which weeps nearly to the ground.

The **Hornbeam** (*Carpinus Betulus*) is a tree of less imposing growth than either of the preceding, but it is much more widely spread than either of them. No soil, however wet or dry, comes amiss to it; and, un-

discouraged by the most ruthless pollarding, it at once "starts" again. It was consequently a favourite tree with the "loppers," and there is hardly a specimen in the Forest which has not been periodically beheaded. This cruel treatment is now put an end to in Epping Forest, and we may expect them to respond with their graceful horizontal growth. It is said to have been originally planted on account of the deer, who browse on its leaves, which are among the earliest to appear. These resemble those of the beech, but are less polished in appearance, and have a saw-like edge. The branches have a curious habit, of which many quaint specimens may be found in the Forest, of reuniting several feet from their point of separation and again forming one stem.

The **Birch** (*Betula alba*).—If the oak is the king of trees, this is the queen. While the beech is remarkable for the massiveness of its foliage, the birch is distinguished by its grace and lightness. Its white stem and fine spray-like branches are a lovely feature even in the depth of winter. Formerly it was not common in the Forest, but, from its enormous production of seeds, which are carried far on the wind by the little wing attached to them, it is spreading itself rapidly, and I anticipate that, in a comparatively short period, it will to a considerable extent supplant the other trees. Wherever a clearance has been made, either intentionally or by accidental fires, if the soil be dry, it appears to spring up spontaneously. The rough open ground by High Beach Church has been quite recently covered by a charming grove of birches, which have probably sown themselves from the neighbouring gardens; and, in the case of a wide roadway cut only fifteen years ago through Lord's Bushes with the intention of selling it in building lots, the crime is already hidden under a similar screen. Those who are now middle-aged will live to see the bare plain between the "Wake Arms" and Monk Wood and other openings, similarly restored by nature.

The **Maple** (*Acer campestre*) is found sparingly in the moister parts of the Forest. It is a small tree, and is not conspicuous until the autumn, when it turns to a fine golden yellow.

The **Common Hawthorn** or **May** (*Cratægus Oxyacantha*).—This is, next to the oak, one of the longest lived of trees. Its rugged stems assume picturesque forms, and are highly characteristic of the Forest, which it enlivens by its early foliage, by its masses of white flowers,

and by its autumn berries. Waggoners, passing through the Forest to London, deck their teams with great branches of May blossom, but there is enough and to spare for all. When not overshadowed by other trees it grows in a dense bush, not more than 12 feet high, with a flat rounded head.

The **Blackthorn** (*Prunus spinosa*) forms the most impenetrable undergrowth in the Forest. It flowers earlier than the may, and is a welcome forerunner of spring. It is the parent of our plums and bullaces, which have been developed from it by ages of cultivation in our gardens.

The **Common Crab** (*Pyrus Malus*) is the wild representative of the apple. It is widely spread through the Forest. The blossoms, with which the tree is smothered in May, are highly ornamental. The deer feed greedily on the apples, which they eat whole, and do not seem any the worse for. For this reason the tree was not allowed to be pollarded. The stems are rugged and picturesque.

The **Bird Cherry** (*Prunus Cerasus*).—I believe I have seen this tree growing in the Forest, and have no doubt that it used to do so, but I cannot now put my hand on it. In any case it is scarce. It is gay in spring, and the autumn leaves colour richly.

The **Common Sallow** or **Goat Willow** (*Salix caprea*) forms a small bush in rough places and the hollows left by old gravel pits. It produces the "goslings" which children are fond of gathering at Easter.

The **Holly** (*Ilex Aquifolium*), the chief evergreen we possess, grows freely throughout the Forest wherever the soil is tolerably dry. It is not much observed in the summer; but when other trees are bare, from the shelter and seclusion which it affords, and from the deep green of its glossy leaves, it is invaluable. For some reason which I cannot explain it does not often bear berries in the Forest. This is as well, as otherwise large quantities of it might disappear at Christmas time.

Butcher's Broom (*Ruscus aculeatus*) is the only other evergreen indigenous to the Forest. There is not much of it, and what there is, is not very ornamental.

EPPING FOREST.

ITS FLOWERING PLANTS.

“ Flowers worthy of Paradise, which not nice art,
In beds and curious knots, but Nature boon,
Poured forth profuse on hill, and dale, and plain ;
Both where the morning sun first warmly smote
The open field, and where the unpierced shade
Imbrowned the noon-tide bowers.”—*Paradise Lost*.

THE flowers of the Forest, though for the most part common enough, are not on that account less attractive in the eyes of Londoners. Of the many thousands who visit us on every sunny day in the summer, few return without securing some floral trophy, which it has given them infinite pleasure to gather.

Owing to its variety of soil and aspect, and the contrast of extremely dry positions with damp hollows, the Forest is, for its extent, particularly rich in its flora. Many of the flowers which reward the diligent seeker are rare or structurally remarkable. Among these may be mentioned the sundew, which catches small insects with its arrangement of gummy hairs, and nourishes itself on their dead bodies ; the grass of parnassus, a beautiful white flower to be found in boggy places ; the bog-bean ; and the lily of the valley. The last

named is uncommon, and if I mentioned its locality it might be exterminated; but as it does not flower here I trust it may be spared.

The plants which may be described as most characteristic of the Forest are the common brake fern, which is universal; the common polypody fern, which grows in the crowns of the pollard tree; the gorse; the petty whin; and the ling or heather, which cover the drier parts; the orchis, of which more than one variety may be found beyond High Beach; and the ground ivy on the clay soil. The aquatic vegetation is a distinct feature, rich in deep greens and graceful forms. Of the water plants the common water-dock is one of the handsomest; the two kinds of bulrush, one tall and very slender, the other bolder in character; the water-lilies; the carices or water-grasses; the sweet-scented rush, with which in ancient times the Monastery floor was strewn; the water-violet; the ranunculus; and the mare's tail, are all full of beauty and character. But the real show is afforded by the masses of the commonest and most familiar flowers, each in their season, and especially of the flowering bushes. Thus in March we have the primrose, though unfortunately the stock of these has been sadly diminished by being dug up in bushels to be sold in London; in April the blue bells and white wood anemone, which may be gathered in quantity in the Walthamstow Forest, at the Cuckoo Pits, between Chingford and High Beach, and elsewhere; in May the hawthorn, crab apple, and gorse; in June the wild rose, water forget-me-not, and many others; in July the honeysuckle and tall flowering grasses, and in

the pools the graceful bulrushes. In September the floral attractions yield to the more succulent charms of the blackberry, and for the rest of the year the gorgeous autumn colours of the trees furnish many a lovely nosegay.

I am indebted to two excellent authorities for the following complete list,—to Professor Boulger, President of the Field Club for 1884, who has devoted much time and attention to the subject; and to Messrs. Ware of Tottenham, whose skilled florists are constantly perambulating the Forest, and who have taken much pains to furnish me with the complete results of their researches.

The less common, or more interesting, are marked with an asterisk.

- **Clematis Vitalba*. Traveller's Joy. Epping. Dry places.
- Anemone nemorosa*. Wood Anemone.
- Ranunculus floribundus*. Water Crowfoot.
- R. trichophyllus*. Water Fennel.
- R. peltatus* } Water Crowfoots.
- R. hederaceus* }
- R. sceleratus*.
- R. Flammula*. Lesser Spearwort. Marshes.
- R. Ficaria*. Lesser Celandine.
- R. auricomus*. Goldilocks.
- R. acris* } Buttercups.
- R. repens* }
- R. bulbosus* }
- R. hirsutus* }
- Nasturtium officinale*. Water-cress.
- Cardamine pratensis* } Ladies' Smock. Moist places.
- C. hirsuta* }
- Sisymbrium officinale*. Hedge Mustard.
- Alliaria officinalis*. Garlic Mustard.
- Sinapis arvensis*. Charlock.
- S. alba*. White Mustard.
- **Alyssum maritimum*.
- Draba verna*. Whitlow-grass.
- **Teesdalia nudicaulis*. Shepherd's-cress.

- Capsella Bursa-pastoris*. Shepherd's-purse.
Viola odorata. Sweet Violet.
V. sylvatica. Wood Violet.
V. arvensis. Wild Heartsease.
 **Drosera rotundifolia*. Sundew. Marshes.
 **Parnassia palustris*. Grass of Parnassus. Marshes.
Polygala vulgaris. Milkwort.
Silene inflata. Bladder Campion. Dry places.
Lychnis vespertina. Evening Campion. Sunny places.
L. diurna. Red Campion. Coppice.
Sagina procumbens } Pearlwort.
S. apetala }
Arenaria trinervia.



SUNDEW.

- A. serpyllifolia*.
Stellaria Holostea. Greater Stitchwort.
S. graminea. Lesser Stitchwort.
S. uliginosa. Bog Stitchwort.
Mœnchia erecta.
Cerastium aquaticum. Water Chickweed.
C. glomeratum. Mouse-ear.
C. triviale.
C. semidecandrum.
C. arvense.
Malva sylvestris. Mallow. Dry places.
M. rotundifolia. Dwarf Mallow. Dry places.
 **Hypericum androsæmum*. Tutsan. Thickets.

- Hypericum tetrapterum*. Square-stalked St. John's-wort.
Damp places.
- H. perforatum*. Perforate St. John's-wort.
- H. humifusum*. Trailing St. John's-wort.
- H. hirsutum*. Hairy St. John's-wort.
- H. pulchrum*. Upright St. John's-wort.
- **H. elodes*. Marsh St. John's-wort.
- Acer campestre*. Maple.
- Geranium dissectum* }
G. rotundifolium } Wild Cranesbills.
G. molle }
- G. robertianum*. Herb Robert.
- Erodium cicutarium*. Storks-bill.
- Radiola millegrana*. Flax-seed.
- **Oxalis Acetosella*. Wood-sorrel. Shady places.
- **Euonymus europæus*. Spindle-wood.
- **Rhamnus catharticus*. Buckthorn.
- **R. Frangula*. Alder Buckthorn.
- Ulex europæus*. Furze.
- U. nanus* }
U. Gallii } Dwarf Furze.
- **Genista anglica*. Petty Whin. Heathy places.
- **Cytisus scoparius*. Broom. Sandy places.
- Ononis campestris*. Rest-harrow.
- Medicago lupulina*. Nonsuch.
- M. maculata*. Spotted Medick.
- Trifolium pratense*. Purple Clover.
- T. maritimum*. Sea Trefoil.
- T. repens*. Dutch Clover.
- **T. ornithopodioides*.
- **T. fragiferum*. Strawberry-headed Trefoil.
- T. minus*.
- Lotus corniculatus*. Bird's-foot Trefoil.
- L. major*. Greater Bird's-foot Trefoil.
- Vicia hirsuta*. Hairy Tare.
- V. tetrasperma*. Smooth Tare.
- V. Cracca*. Tufted Vetch.
- V. sepium*. Bush Vetch.
- **V. Bobartii*. Small Crimson Vetch.
- Lathyrus pratensis*. Meadow Vetchling.
- Orobus tuberosus*. Bitter Vetch.
- Ornithopus perpusillus*. Bird's-foot.
- Prunus spinosa*. Sloe.
- Spiræa Ulmaria*. Meadow-sweet. Wet places.
- Agrimonia Eupatoria*. Agrimony. Sunny places.
- Alchemilla arvensis*. Parsley Piert.
- Potentilla anserina*. Silver-weed.

- Potentilla reptans*. Creeping Cinquefoil.
 **P. Tormentilla*. Tormentil.
P. procumbens. Trailing Tormentil.
P. Fragariastrum. Barren Strawberry.
Fragaria vesca. Wild Strawberry.
Rubus Idæus. Raspberry.
R. Lindleianus }
R. affinis }
R. discolor }
R. leucostachys }
R. carpinifolius } Brambles.
R. pallidus }
R. Koehleri }
R. glandulosus }
R. corylifolius }



DEWBERRY.

- R. cæsius*. Dewberry.
Geum urbanum. Avens.
Rosa tomentosa. Downy Rose.
R. micrantha. Lesser Sweet-brier.
R. rubiginosa. Sweet-brier.
 **R. canina*. Dog Rose.
R. arvensis. White Rose.
Cratægus Oxyacantha. Hawthorn.
 **Pyrus malus*. Crab Apple.
 var. acerba.
 var. mitis.
 **P. torminalis*. Wild Service.
Peplis Portula. Water Purslane.
 **Epilobium angustifolium*. Rosebay }
E. hirsutum. Codlins-and-cream } Moist places.

- Epilobium parviflorum*. Small-flowered Wil-
 low-herb }
E. montanum. Smooth-leaved Willow-herb } Moist
E. tetragonum. Square-stalked Willow-herb } places.
E. palustre. Narrow-leaved Willow-herb }
 **Circæa lutetiana*. Enchanter's Nightshade. Shady
 places.
Myriophyllum alterniflorum. Water Milfoil.
Bryonia dioica. White Bryony.
Montia fontana. Water Blinks.
M. rivularis.
Arenaria rubra. Red Sandwort.
Saxifraga tridactylites. Dry situations.
S. granulata. Meadow Saxifrage.
Chrysosplenium alternifolium } Golden Saxifrage.
C. oppositifolium } Marshes.
 **Hydrocotyle vulgaris*. White-rot. Marshes.
Sanicula europæa. Wood Sanicle.
Sison Amomum. Hedge Honewort.
Bunium flexuosum. Earth-nut.
Æthusa Cynapium. Fool's Parsley.
Silaus pratensis. Pepper Saxifrage.
Angelica sylvestris. Wild Angelica.
Peucedanum palustre. Milk Parsley.
Heracleum Sphondylium. Cow Parsnip.
Daucus Carota. Carrot.
Caucalis Anthriscus. Upright Hedge Parsley.
C. nodosa. Knotted Hedge Parsley.
Scandix Pecten-veneris. Shepherd's Needle.
Chærophyllum sylvestre. Wild Chervil.
C. temulum. Rough Cow Parsley.
Conium maculatum. Hemlock.
 **Adoxa Moschatellina*. Moschatel. Shady places.
Hedera Helix. Ivy.
Cornus sanguinea. Dog-wood.
 **Viscum album*. Mistletoe.
 **Sambucus Ebulus*. Danewort.
S. nigra. Elder.
Viburnum Lantana. Wayfaring-tree.
 **Lonicera Periclymenum*. Honeysuckle.
Sherardia arvensis. Field-madder. Open fields, fallows,
 etc.
 **Asperula odorata*. Woodruff.
Galium Aparine. Goose-grass. Hedgerows.
G. Mollugo. Hedge Bed-straw.
G. verum. Yellow Bed-straw. Heaths.
G. saxatile. Heath Bed-straw.

- Galium uliginosum.** Marsh Bed-straw.
G. palustre. Water Bed-straw.
Valeriana officinalis. Great Valerian. Shady places.
Dipsacus sylvestris. Teasel. On clay.
Knautia arvensis. Field Scabious.
 ***Scabiosa succisa.** Devil's-bit Scabious. Heaths.
Tussilago Farfara. Coltsfoot.



TEASEL.

- Bellis perennis.** Daisy.
 ***Solidago Virgaurea.** Golden-rod.
Pulicaria dysenterica. Fleabane.
Bidens tripartita. Bur-marigold } Damp places.
B. cernua. Nodding Bur-marigold }
Anthemis arvensis. Corn Chamomile.
A. Cotula. May-weed.
A. nobilis. Common Chamomile.

- Achillea Ptarmica.* Sneezewort.
A. Millefolium. Milfoil.
Chrysanthemum Leucanthemum. Moon-daisy.
Matricaria Parthenium. Feverfew.
M. Chamomilla. Wild Chamomile.
Artemisia vulgaris. Mugwort.
Filago germanica. Cudweed.
F. minima. Least Cudweed.
Gnaphalium uliginosum. Marsh Cudweed.
G. sylvaticum. Wild Cudweed.
Senecio vulgaris. Groundsel.
S. Jacobæa. Ragwort.
S. aquaticus. Waterwort.
Arctium majus
A. intermedium } Burdocks.
A. minus
Serratula tinctoria. Saw-wort.
Centaurea nigra. Black Knapweed.
C. nigrescens.
C. Scabiosa. Great Knapweed.
Onopordon Acanthium. Cotton Thistle.
Carduus crispus. Curl-leaved Thistle.
C. lanceolatus. Spear Thistle.
C. arvensis. Creeping Thistle.
 **C. palustris.* Marsh Thistle.
C. pratensis. Meadow Thistle.
Lapsana communis. Nipplewort.
Hypochæris radicata. Cat's-ear.
Apargia hispida. Rough Hawkbit.
A. autumnalis. Autumn Hawkbit.
Tragopogon minus. Lesser Goat's-beard.
Helminthia echioides. Bristly Ox-tongue.
Lactuca muralis. Wall Lettuce.
Leontodon Taraxacum. Dandelion.
Sonchus oleraceus
S. asper } Sow Thistles.
S. arvensis
Hieracium Pilosella. Mouse-ear Hawkweed.
H. vulgatum. Wood Hawkweed.
H. boreale. Broad-leaved Hawkweed.
Campanula rotundifolia. Hare-bell. Heathy places.
 **C. hederacea.* Ivy-leaved Bell-flower. Bogs.
 **Calluna vulgaris.* Ling.
 **Erica Tetralix.* Cross-leaved Heath.
 **E. cinerea.* Fine-leaved Heath.
 **Vaccinium Myrtillus.* Bilberry.
 **Ilex aquifolium.* Holly.

- Fraxinus excelsior*. Ash.
Ligustrum vulgare. Privet.
Erythræa Centaurium. Centaury. Sunny places.
 **Menyanthes trifoliata*. Buckbean. Bogs.
Convolvulus arvensis. Bindweed.
 **Cuscuta epithymum*. Lesser Dodder.
Lithospermum arvense. Corn Gromwell.
Myosotis palustris. Forget-me-not. Damp places.
M. cæspitosa
M. arvensis
M. versicolor } Scorpion-grasses. Dry places.
Solanum Dulcamara. Bitter-sweet.
 **Atropa Belladonna*. Deadly Nightshade.
 **Hyoscyamus niger*. Henbane.
 **Orobanche major*. Great Broom-rape.
Verbascum Thapsus. Great Mullein.
 **Digitalis purpurea*. Foxglove.
Antirrhinum Orontium. Lesser Snapdragon.
Linaria vulgaris. Toadflax.
Scrophularia nodosa. Figwort.
S. aquatica. Water Figwort.
 **Limosella aquatica*. Mudwort.
 **Melampyrum pratense*. Cow-wheat.
Pedicularis palustris. Tall Red-rattle
P. sylvatica. Dwarf Red-rattle
P. sylvatica flore albo. White variety } Damp places.
Euphrasia officinalis. Eyebright.
Bartsia Odontites. Dry places.
Veronica Anagallis. Water Speedwell.
V. Beccabunga. Brooklime.
V. Chamædrys. Germander Speedwell.
V. officinalis. Common Speedwell.
V. serpyllifolia. Smooth Speedwell.
V. arvensis.
V. Buxbaumii.
V. polita.
V. hederifolia.
Mentha aquatica. Water Mint.
M. agrestis.
M. Pulegium. Penny-royal.
Lycopus europæus. Gipsy-wort. Damp places.
Calamintha Clinopodium. Wild Basil.
Melissa officinalis. Balm.
Prunella vulgaris. Self-heal.
Nepeta Glechoma. Ground-ivy.
Lamium purpureum. Red Dead-nettle.
L. album. White Dead-nettle.

- Lamium Galeobdolon.* Yellow Dead-nettle.
Galeopsis Tetrahit. Hemp-nettle.
 **Stachys Betonica.* Wood Betony.
S. sylvatica. Hedge Woundwort.
Ballota foetida. Black Horehound.
Marrubium vulgare. White Horehound.
 **Teucrium Scorodonia.* Wood Sage.
Ajuga reptans. Bugle.
Verbena officinalis. Vervain.
 **Utricularia vulgaris.* Bladderwort } In water.
 **U. neglecta* }
Primula vulgaris. Primrose.
P. veris. Cowslip.
 **Hottonia palustris.* Water-violet.
Lysimachia Nummularia. Money-wort. Wet places.
L. vulgaris. Loosestrife.
L. nemorum. Yellow Pimpernel. Moist shady places.
Anagallis arvensis. Scarlet Pimpernel.
 **A. tenella.* Bog Pimpernel.
Centunculus minimus. Bastard Pimpernel.
Plantago lanceolata. Ribwort Plantain.
P. media. Hoary Plantain.
P. major. Greater Plantain.
 **Littorella lacustris.* Shore-weed.
Chenopodium album. White Goose-foot.
C. Bonus-Henricus. Good King Henry.
Atriplex angustifolia }
A. erecta } Oraches.
A. deltoidea }
A. hastata }
Rumex conglomeratus } Docks.
R. sanguineus }
R. obtusifolius } Docks.
R. crispus }
R. acetosa. } Sorrels.
R. Acetosella. }
Polygonum lapathifolium.
P. Persicaria }
P. Hydropiper } Persicarias.
P. minus }
P. maculatum }
P. aviculare. Knot-grass.
P. Convolvulus. Black Bindweed.
 **Daphne Laureola.* Spurge Laurel.
Euphorbia Helioscopia. Sun Spurge.
E. amygdaloides. Wood Spurge.
E. Peplus. Petty Spurge.

- Euphorbia exigua*. Dwarf Spurge.
Mercurialis perennis. Dog's Mercury.
Ceratophyllum demersum. Hornwort.
Callitriche verna. Water Starwort.
Urtica urens. Small Nettle.
U. dioica. Common Nettle.
Ulmus campestris. Common Elm.
Salix aquatica. Water Sallow.
S. aurita. Trailing Sallow.
S. Caprea. Great Sallow.
S. ambigua.
S. repens
S. fusca
S. prostrata
S. ascendens
S. incubacea } Dwarf Willows.
Populus tremula. Aspen.
Betula alba. Silver Birch.
**Fagus sylvatica*. Beech.
Quercus pedunculata. Oak.
Corylus Avellana. Hazel.
**Carpinus Betulus*. Hornbeam.
Paris quadrifolia. Herb Paris.
Tamus communis. Black Bryony.
Orchis mascula. Early purple Orchis.
**O. maculata*. Spotted Orchis. Damp spots.
Habenaria bifolia. Butterfly Orchis.
**Spiranthes autumnalis*. Ladies'-tresses.
**Neottia nidus-avis*. Bird's-nest Orchis. Among Beech leaves.
Listera ovata. Sway-blade.
Epipactis media. Helleborine.
Iris fœtidissima. Stinking Iris.
**Convallaria majalis*. Lily of the Valley.
**Polygonatum multiflorum*. Solomon's Seal.
**Ruscus aculeatus*. Butcher's Broom.
Scilla nutans. Bluebell.
Juncus effusus. Soft Rush.
J. conglomeratus
J. glaucus
J. diffusus
J. acutiflorus
J. lamprocarpus
J. squarrosus
J. bufonius } Rushes.
Luzula campestris
L. multiflora } Wood-rushes.

- Alisma Plantago*. Water-Plantain.
A. ranunculoides. Lesser Water-Plantain.
Typha latifolia }
T. angustifolia } Reed-maces.
Sparganium simplex. Bur-reed.
Arum maculatum. Lords and ladies.
Lemna minor }
L. gibba } Duckweeds.
Potamogeton natans }
P. polygonifolius } Pondweeds.
P. heterophyllus }
Eleocharis palustris }
**E. multicaulis* } Spike-rushes.
**E. acicularis* }
Scirpus pauciflorus }
S. fluitans } Club-rushes.
S. setaceus }
**Eriophorum angustifolium* (?). Cotton Grass. Bogs.
Carex pulicaris }
C. disticha }
C. vulpina }
C. paniculata }
C. ovalis }
C. acuta }
C. pallescens }
C. panicea }
C. præcox } Sedges.
C. pilulifera }
C. glauca }
C. flava }
C. binervis }
C. Pseudo-cyperus }
C. hirta }
C. paludosa }
C. riparia }
Phleum pratense. Cat's-tail Grass.
Alopecurus pratensis. Fox-tail Grass.
A. geniculatus. Floating Fox-tail Grass.
Nardus stricta. Mat-grass.
Phragmites communis. Reed.
Calamagrostis Epigejos. Wood Reed.
Agrostis canina }
A. vulgaris } Bent-grasses.
A. pumila }
A. alba }
Holcus lanatus } Soft-grasses.
H. mollis }

- Aira cæspitosa*
A. flexuosa
A. caryophyllacea
A. præcox } Hair-grasses.
Avena flavescens.
Arrhenatherum avenaceum.
Triodia decumbens.
Molinia cærulea. Purple Melic-grass.
Poa annua
P. nemoralis } Meadow-grass.
P. trivialis
Glyceria aquatica. Sweet-grass.
Cynosurus cristatus. Dog's-tail Grass.
Dactylis glomerata. Cock's-foot Grass.
Festuca myurus. Wall Fescue-grass.
F. ovina. Sheep's Fescue-grass.
Bromus asper
B. sterilis
B. mollis
Brachypodium sylvaticum } Brome-grasses
Triticum repens. Couch-grass.
Hordeum murinum. Wall Barley.
Lolium perenne. Rye-grass.
Taxus baccata. Yew.
Juniperus Communis. Juniper.
Lysimachia numularia. Creeping Jenny.

Among the FERNS found on the Forest the most abundant are *Pteris aquilina*, the common brake-fern, which grows wherever it is dry; *Scolopendrium vulgare*, the Harts-tongue; *Lustrea filix-mas*, the Male fern; *Polypodium vulgare*, the Polypody which clothes the crowns of pollards. For further information about FERNS, see *Trans. Essex Field Club*, vol. i. p. 25; iii. pp. lxi., lxii.; ii. p. lxv.

EPPING FOREST.

ITS FUNGI.

“ You demi-puppets, that
By midnight do the green-sour ringlets make
Whereof the ewe not bites ; and you, whose pastime
Is to make midnight mushrooms.”—*The Tempest.*

I DO NOT know that it is anything to be proud of, but, as a matter of fact, Epping Forest is blessed with an abundance of toadstools beyond any other district within easy reach of London. The surface of the ground and the stems of partially decayed trees are studded in the autumn months with a great variety of forms of fungi, some remarkable for the brilliance of their colours, others noteworthy for their curious forms. In size they vary from huge gnarled specimens a foot in diameter to the minutest thread-like mildew. Some are fashioned like parasols, others are concave and resemble vases or goblets. Some are circular, some columnar, and others have no defined shape at all. The colours comprise black, pearly white, purple, orange, yellow, and the most brilliant scarlet. Some are smooth and satiny in appearance, others studded with scales and bosses of darker colour. Their characteristics change to an extraordinary extent with the different stages of

their growth. In duration they vary greatly. "Many spring up in a night and dissolve next day, or at least at the first shower of rain. Some are so delicate that they tremble in the hand when gathered, and, as in the case of *Coprinus radiatus*, melt away if breathed upon. Others, growing on old trees, are perennial, and almost as hard as wood." Their simplest forms consist of minute articulated filaments. Their highest developments are the brilliant domes and minarets which are called *agarics*, and which jewel the mossy banks in September and October. They are sought by many naturalists, not only for their intrinsic beauty, but for their varied structure, and the interesting problems which they present to the botanist and the microscopist. The bolder spirits try experiments in their edible qualities, but this cannot be done with impunity except by those who have acquired intimate knowledge of the varieties.

The Forest Field Club annually devotes a day to a "fungus foray," and generally secures some rare and beautiful specimens. A method has been invented for their preservation with the natural colour, by Mr. English, the enthusiastic naturalist of Epping,¹ to whom I am indebted for the list of Forest fungi which follows, and upon whose information, furnished to me, these remarks are founded. Their habitats vary greatly, but all derive their nourishment from decaying animal or vegetable matter. It is difficult to localise the species, as, having found a rare kind in a certain spot once, is no guarantee that it will reappear there the following year, and it may even be many

¹ See *Manual on the Preservation of the Larger Fungi and Flowers*, published by James English, Epping. Price 2s. 6d.

years before the conditions favourable to its production will repeat themselves. The real plant proper, or Mycelium, dives underground, and may live for years in that condition without producing its fungi, which are analogous to the flower or fruit of a plant. However, the most probable localities are indicated in the following list :—

- Agaricus muscarius.** A splendid plant, the pileus or cap three to six inches across, of a rich orange scarlet, beset with angular warts. Under beech and birch trees. Plentiful throughout the shady parts.
- Agaricus vernus.** Large, white, having a remarkable round volva. High Beach, rare.
- Agaricus procerus.** Parasol mushroom. A handsome, tall, gray plant. The pileus broken up into sub-reflexed scales somewhat resembling thatch. On open spaces, Fairmead, Theydon thickets.
- Agaricus constrictus.** White, stout. Epping Lower Forest, Sept. 1883.
- Agaricus mucidus.** White, very glutinous, very beautiful. Growing in masses or singly, old beech trunks.
- Agaricus saponaceous.** Pretty gray plant, sometimes reticulated. Monk Wood, Epping Lower Forest.
- Agaricus resplendens.** Silvery white. Epping Upper Forest, rare.
- Agaricus cyathiformis.** Dark cup-shaped plant. Found in early winter. Epping.
- Agaricus odoratus.** Light glaucous green, odour fragrant. Amongst dead leaves. Epping Lower Forest.
- Agaricus radicans.** Tall handsome plant, very broad distant gills. Old stumps. High Beach, Epping.
- Agaricus maculatus.** Creamy white, often spotted, amongst heather. High Beach, Theydon thickets.
- Agaricus ostreatus.** Oyster mushroom, a very striking plant when seen growing in masses, tiled one above another like shells. Trunks, mostly hornbeam, etc. Epping Lower Forest, High Beach.
- Agaricus prunulus.** White, pink gills. In open glades, on the ground ; many specimens together. High Beach, Epping.
- Agaricus adiposus.** Very handsome when young, the scaly pileus much resembles a pine-apple. Beech trunks. High Beach.
- Agaricus spectabilis.** A very fine conspicuous plant, three

to six inches in diameter, bright tawny orange, stem swollen below. On stumps and buried chips. High Beach, Epping.

Agaricus pyriodorus. Smells like rotten pears. Monk Wood.

Agaricus inopus. Not common. Near King's Oak, High Beach.

Agaricus cartonarius. This plant occurred after the large fire that consumed the Forest between Wake Arms and Monk Wood. It cropped up in thousands, and lingered for some time on the charcoal beds, now nearly died out.

Agaricus storea. Rather a dingy-looking plant, but rare. Monk Wood.

Cortinarius purpuracens. Purple-stemmed plant. High Beach, Epping.

Cortinarius decolorans. Pale-iced. Not common. Theydon thickets, Epping.

Cortinarius riederi. Yellow. Rare. Epping.

Cortinarius aboviolescens. White, with a tinge of violet, very handsome, under beeches and holly. Ambresbury Banks, Epping Lower Forest.

Cortinarius orellanus. Monk Wood, rare.

Cortinarius cennabarinus. Very bright red plant, the mycelium blood-red. Monk Wood.

Hygrophorus eburneus. This pretty pure white plant may be found on the elevated sides of Monk Wood, especially that side nearest to the new road, where it has occurred constantly for many years in company with its close ally, *H. cossus*, which has the scent of the goat.

Hygrophorus virgineus. Ivory-white gills, running down the stem. Damp open spaces and glades, between the King's Oak and Wake Arms.

Hygrophorus cocineus. { These two bright coloured plants occur amongst heath and ferns.
Hygrophorus miniatus. { Back of Wake Arms and side of road by Copped Hall Lodge.

Lentinus cochleatus. Curious twisted plant, many pilei crowded together, so as to form one entire plant, scent like new made hay. At the base of hornbeam stumps.

Boletus piperatus. The smallest of the genus. Theydon, Epping.

Boletus rubinus. Rare. Epping Lower Forest.

Boletus luridus. A forbidding looking plant, changes blue when cut or broken. Very poisonous.

Boletus Satanus. One of the largest of the genus, tubes red. Epping Lower Forest.

- Boletus parasitica.** Parasitic on *Scleroderma vulgare*.
Thickets by Copped Hall Lodge Road.
- Boletus rutilus.** New plant to Britain, 1883. Between the
Robin Hood and the Loughton Camp.
- Polyporus picipes.** A curious little plant, stem half black.
Epping Upper Forest.
- Polyporus intybaceous.** Very large elegant plant, with
numerous branching pilei.
- Polyporus giganteum.** The largest of the genus, growing
sometimes as much as four feet across.
- Polyporus imbricatus.** Growing on old oak stump. Rare.
Not been seen for twelve years. Near King's Oak,
High Beach.
- Polyporus umbellatus.** Very curious plant, branching from
a central stem with numerous round pilei. New to
Britain, 1883. Epping Lower Forest.
- Hygrophorus chrysodon.** White, spotted golden yellow.
Not common. Monk Wood.
- Lactarius torminosa.** Stout, woolly, and zoned with orange.
Under sallows. Theydon thickets.
- Lactarius controversus.** Large, pileus as an inverted cone,
stem short, amongst heath. Open glade between King's
Oak and Wake Arms, the only place it has been observed
in the Forest. Here it has been constant.
- Lactarius trivialis.** This plant cropped up in quantity
about twelve years ago, but has not been observed since.
Lower Forest.
- Lactarius gliciosmus.** Dove coloured. Damp situations,
under birch. Theydon road.
- Lactarius volemus.** Very fine plant, pileus and stem one
uniform rich red-brown colour, mid-August. Epping
Lower Forest.
- Lactarius vellereus.** The largest plant of this genus; some
specimens, when well grown, will hold more than a pint
of water.
- Lactarius pipiratus.** Usually called the fiery milk mushroom.
- Russula virescens.** Occurs middle of August. Near Am-
bersbury Bank, Epping Lower Forest.
- Russula lepida.** A very beautiful plant, but very uncertain;
usually occur after a hot summer.
- Russula rubra.** Pileus dark red, not common. High Beach.
- Russula emitica.** Bright scarlet, gills white. Poisonous.
- Cantherellus cibarius.** Whole plant orange. Scent like
apricots, very handsome. Monk Wood. Theydon
thickets, Epping.
- Marasmius fusco-purpureus.** Amongst dead leaves. Monk
Wood.

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- Hydnum erinaceum.** A curious plant with long spines, and stemless. On old pollard oaks, growing high up on the trunk. Rare. Epping Lower Forest.
- Hydnum cirrhatum.** The only plant of this species on record. Growing on trunk of beech near Theydon Road.
- Craterellus cornucopioides.** Singular trumpet-shaped plant. On the ground. Monk Wood.
- Thelephora multizonata.** A very beautiful plant, forming a dense mass of a reddish tint. Very local. Epping Lower Forest.
- Clavaria aurea.** A handsome plant, yellow, very much branched, like red coral. Monk Wood.
- Clavaria fusiformis.** Bright golden yellow, about three inches high. Many individuals collected into a tuft.
- Clavaria pistillaris.** Plant six to ten inches high, in shape of a club. Monk Wood.
- Phallus impudicus.** White, honeycombed, very fetid. Monk Wood, Epping.

EPPING FOREST.

ITS MOSSES.

“ Beneath the birch with silver bark,
And boughs so pendulous and fair,
The brook falls scattered down the rock
And all is mossy there.”

COLERIDGE.

THE majority of those who come to the Forest confine their visits to the summer months, leaving its glades comparatively deserted in what, to my mind, are the two most beautiful periods of the year—May, when the birches and beeches put on their tender green, and again when, in the late autumn, the same leaves turn to bronze and gold, contrasting with the lustre of green moss and the spotted beauties of the fungus family.

The mosses only begin to put forth their most brilliant greens and feathered growth when other vegetation is withered and dead, and it is in what are generally known as the dull months that many of them are in the most interesting stage to the naturalist and collector—viz. in fruit. These plants lend themselves more readily than any other to the art of mounting and preserving, as they retain their brilliancy of colour for many years, and their delicacy and variety of form are

well shown on the mounting card. For purposes of identification Mr. English has prepared a very beautiful series of dried specimens, which may be obtained from him at Epping. He has also furnished me with the following list of the more important of the mosses which he has collected in the Forest, with their localities. I append it for the benefit of the numerous class of students who make these plants the object of, and the excuse for, winter rambles.

Sphagnum rubellum. Forming rosy tufts, on the margin of boggy places. By the side of Copped Hall Lodge Road.

Dicranella heteromalla. This little gem of early spring, with its hair-like foliage and glowing orange fruit, grows under oaks and by the side of old gravel-pits.

Dicranum scoparium. A pretty light green plant, with foliage slightly curved, in dense masses, as soft as a cushion.

Leucobryum glaucum. Glaucous green, quite a departure from the usual run of mosses, appearing like mounds rather than moss; rarely found in fruit. In and near Monk Wood.

Ceratodon purpureus. Most abundant by the side of the Theydon Road on old charred mounds where the heather has been burned.

Funaria hygrometrica. On charred places where fires have occurred.

Philonotis fontana. A curious forked plant; very local; grows in a bog by the Wake Arms, Theydon Road, and Loughton Road.

Bryum argenteum. A pretty silvery plant. On banks near Theydon.

Mnium undulatum. Moist places. Epping Lower Forest.

Mnium hornum. Sometimes called Swan's Neck Moss, from the curvature of the upper part of the fruit-stalk.

Aulacomnium palustre. Damp and boggy places.

Tetraphis pellucida. On old stumps and damp places. Close by Ambresbury Bank.

Polytrichum commune. In bogs.

Polytrichum juniperum. Gravel-pits by Wake Arms.

Thuidium tamariscinum. Very handsome, bright green, fern-like.

- Eurynchium striatum*. Epping Lower Forest.
Hypnum cuspidatum. Damp places. Bogs.
Hypnum schreberi. In masses amongst heath. Common.
Hypnum splendens. Often shaded with bronze, very elegant, like the frond of a fern.
Hypnum triquetrum. This is the well-known "French Moss" sold at Covent Garden for decorations.
Lycopodium clavatum. Club moss, sometimes called Stag's-horn Moss. Between Monk Wood and Cowper's Camp.

The following mosses have also been gathered in the Forest, but it is probably far from an exhaustive list of those inhabiting the locality—

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|----------------------------------|----------------------------------|
| <i>Atrichum undulatum</i> . | <i>Hypnum ruscifolium</i> . |
| <i>Aulacomnion androgynum</i> . | <i>H. rutabulum</i> . |
| <i>A. palustre</i> . | <i>H. Schreberi</i> . |
| <i>Bartramia fontana</i> . | <i>H. serpens</i> . |
| <i>B. pomiformis</i> . | <i>H. splendens</i> . |
| <i>Bryum argenteum</i> . | <i>H. squarrosum</i> . |
| <i>B. cæspiticium</i> . | <i>H. striatum</i> . |
| <i>B. capillare</i> . | <i>H. tamariscinum</i> . |
| <i>B. carneum</i> . | <i>H. triquetrum</i> . |
| <i>B. pseudotriquetrum</i> . | <i>H. undulatum</i> . |
| <i>Campylopus flexuosus</i> . | <i>H. velutinum</i> . |
| <i>Ceratodon purpureus</i> . | <i>Isothecium myosuroides</i> . |
| <i>Dicranum cerviculatum</i> . | <i>I. myurum</i> . |
| <i>D. heteromallum</i> . | <i>Leskea sericea</i> . |
| <i>D. fuscescens</i> . | <i>Leucobryum glaucum</i> . |
| <i>D. scoparium</i> . | <i>Mnium hornum</i> . |
| <i>Fissidens bryoides</i> . | <i>M. punctatum</i> . |
| <i>F. taxifolius</i> . | <i>M. undulatum</i> . |
| <i>Fontinalis antipyretica</i> . | <i>Neckera complanata</i> . |
| <i>Funaria hygrometrica</i> . | <i>Orthotrichum affine</i> . |
| <i>Grimmia pulvinata</i> . | <i>Phascum cuspidatum</i> . |
| <i>Hypnum aduncum</i> . | <i>P. nitidum</i> . |
| <i>H. albicans</i> . | <i>P. serratum</i> . |
| <i>H. confertum</i> . | <i>P. subulatum</i> . |
| <i>H. cupressiforme</i> . | <i>Physcomitrium pyriforme</i> . |
| <i>H. cuspidatum</i> . | <i>Pogonatum aloides</i> . |
| <i>H. denticulatum</i> . | <i>P. nanum</i> . |
| <i>H. prælongum</i> . | <i>Polytrichum commune</i> . |
| <i>H. purum</i> . | <i>P. juniperinum</i> . |
| <i>H. riparium</i> . | <i>P. piliferum</i> . |

Pottia truncata.
Sphagnum acutifolium.
S. contortum.
S. cymbifolium.
Tortula lævipila.
T. muralis.
T. subulata.

Tortula unguiculata.
Weissia cirrhata.
W. controversa.
Zygodon Forsteri (gathered
by Mr. Holmes).
Z. viridissimus.

TIME-TABLE OF THE CHING

DOWN

Fenchurch St. to Loughton. . .	A.M. ..	A.M. ¶7.38	A.M. 8.13 8.37 8.52	A.M. ..	A.M. ¶10.13	A.M. 11.13	P.M. ¶12.28	P.M. *1.3
Liverpool St. to Loughton. . .	..	7.0	..	¶9.13 9.22	10.9	11.13	12.20	1.5 1.43
Liverpool St. to Chingford . .	6.33	7.32	8.3	9.4	10.6 10.9	11.3	12.2 12.20	1.2 1.32
Liverpool St. to Forest Gate . .	6.20 6.50	7.43	8.25 8.30 8.41 8.54	‡9.15 9.45	10.15 10.46	11.22 11.26 11.45	12.20 12.50	1.10 *1.22 1.48
Fenchurch St. to Forest Gate . .	..	7.30	8.30	9.30	10.30	11.30	12.30	*1.3 1.31

¶ Run beyond Loughton to

UP

Loughton to Fen- church St. . .	6.50	7.20 ¶7.48	8.4 8.21 8.39	9.5 ¶9.15 9.57	10.23	11.24	..	¶1.12
Loughton to Liver- pool St. . . .	..	7.54	¶8.32 8.45 8.55	9.21	¶10.8	¶11.1	12.12	..
Chingford to Liver- pool St. . . .	6.55	7.53	8.27 8.57	9.6 9.27 9.55	10.55	11.13 11.55	12.55	1.3 †1.55
Forest Gate to Liverpool St. .	6.8 6.24 6.50	7.20 7.50	8.10 8.16 8.23 8.37 8.49	9.9 9.21 9.28 9.47	10.23 10.55	11.20 11.50	12.20 12.45	1.8 1.20 *1.35 1.42
Forest Gate to Fenchurch St. .	..	7.2 7.31	8.2 8.19	9.4 9.37	10.5	11.2 11.58	..	1.1

¶ Start from Ongar and pass Epping 16 minutes, and Theydon 12

† Not on Saturday.

‡ Wednesdays

FORD AND LOUGHTON RAILWAYS.

TRAINS.

P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	A.M.
*2.2	3.13	4.13	5.13	¶6.3	7.13	¶8.16	9.25	¶10.23	..	..
¶2.13	*3.46	¶4.36	5.43	†6.13	7.48	8.46				
*2.43		†4.45		¶6.43						
*2.35	¶3.36	4.6	5.5	†6.6	7.22	..	9.45	..	11.10	..
2.51		†4.27	¶5.35	6.21					11.52	
2.2	3.3	4.2	5.2	6.2	7.3	8.4	9.3	10.10	..	§12.10
2.10	3.32	4.35	5.32	6.6	7.33	†8.7	9.50			
2.32				6.32		8.32				
*2.5	3.15	4.9	5.10	*6.8	7.10	8.1	9.31	10.16	11.0	12.20
2.10	3.50	4.27	5.50	6.20	7.13	8.45	9.50		11.45	
*2.20		4.42		6.35		8.50				
2.47				6.52						
2.51										
*2.20	3.31	4.30	†5.8	6.35	7.27	8.27	9.32	10.30	..	..
2.35			5.35							

Heydon, Epping, and Ongar.

TRAINS.

2.21	*3.2	4.45	¶5.12	6.17	¶7.22	8.20	9.18	..	..	..
	¶3.45		¶5.47	6.50	7.48					
2.30	..	¶4.15	5.37	6.23	..	¶8.52	9.55	¶10.52	..	..
2.25	3.13	4.25	5.9	6.25	7.16	8.25	9.13	10.10	..	..
2.55	3.25	4.55	5.25	6.55	7.25	8.55	9.28	10.50		
	3.55		5.55		7.55					
2.20	3.20	4.40	5.10	6.21	7.7	8.5	9.1	10.0	11.20	..
2.35	3.36		5.20	6.29	7.12	8.20	9.20	10.20		
2.44	3.50				7.28			10.25		
2.7	..	4.1	5.1	6.2	7.2	8.1	9.5	10.5	..	..
2.59										

minutes, before the advertised time at Loughton.

* Saturdays only.

only. § Thursdays only.

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